The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

VOL. 24. NO. 29 TULSA, OKLAHOMA, DECEMBER 10, 1925

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Small Decline in Crude Oil Production

Highest daily average estimated production this year, week ended May 30, 2,347,984 bbls. Lowest January 3, 1,911,730 bbls.

Output of United States Being Maintained at High Level Despite Big Slump in Garber Field

By Andrew M. Rowley

Highest daily average estimated light oil production this year, week ended January 17, 1,525,220 bbls. Lowest July 18, 1,374,173 bbls.

While the average daily production of the Garber Field in Oklahoma last week was 19,000 barrels less than for the week previous, the output of the entire United States declined only 8,670 barrels daily and light oil production was only 9,472 barrels a day less. Increased production in North Texas, the Rocky Mountain area and in Louisiana offset to some extent the drop in light oil output at Garber while gains in the Smackover Heavy Field and in the Gulf Coast area resulted in a slight increase in heavy oil production.

New development in the Long Beach Field in California is being reflected in a greater output there and some operators feel production in that field may reach 125,000 barrels a day. There is considerable wildcatting going on in numerous promising areas of the country which should be watched carefully as several already show good indications of being productive.

Premium paying in several fields is responsible for much talk of crude price increases and it is believed this situation will result in an increase in eastern fields within the near future. There are two facts which should be remembered by everyone interested in a continued prosperity for the petroleum industry. The first is that crude oil production at present is greater than current needs and with the large stocks above ground, the industry would be better off if price increases for crude were postponed for some time. A postponement of increases in prices now means prosperity over a greater period. The second fact is the effect increases in crude oil prices in Eastern, Mid-Continent and Gulf Coast areas would have on the shipment of crude and refined oils from California. Higher prices outside of California would result in greater shipments of California products and these would automatically replace to just that extent the demand for crude and refined oils from other areas.

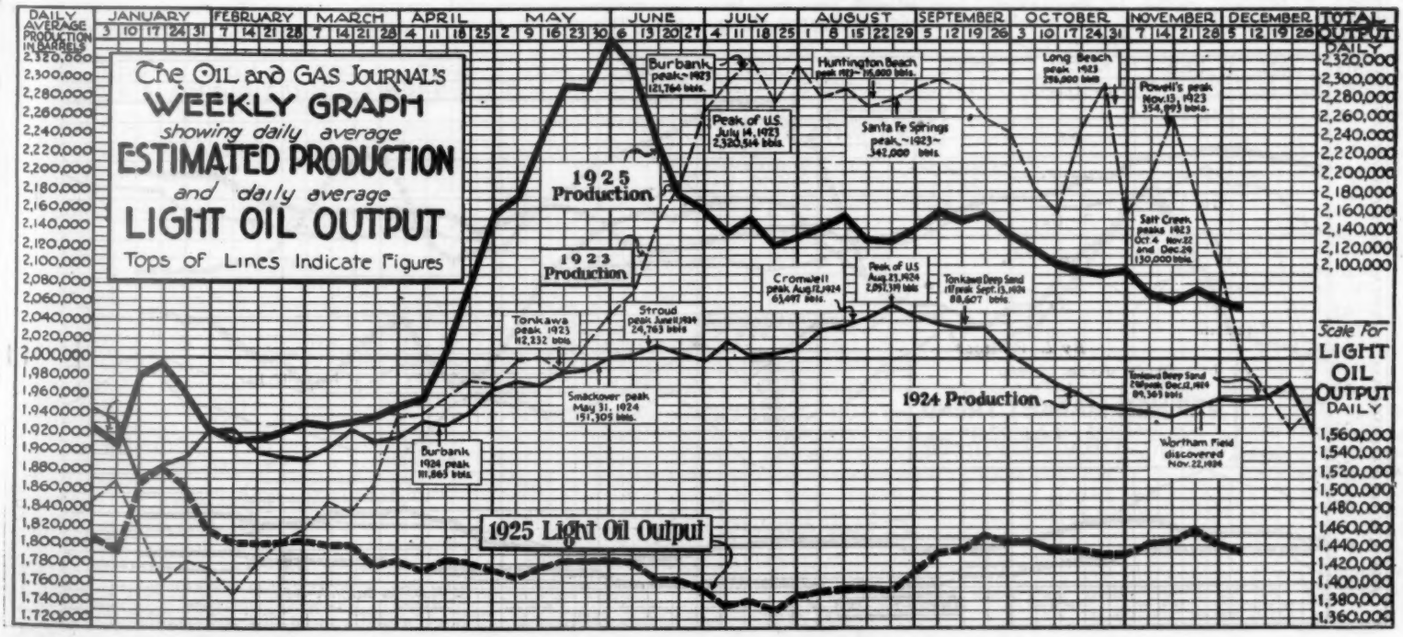
No great change in crude oil production should be expected for several months. California's output is being maintained and probably will continue at more than 600,000 barrels daily for some time. No material declines can be expected in other areas. Consequently, it seems the best interests of the industry as a whole would be better served if present prices were premitted to obtain for some time to come. come.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity crude oil in the United States for week ended December 5, and a comparison with the previous week follows:

	Dec. 5		Nov. 28	
	Light	Heavy	Light	Heavy
Oklahoma				
Tonkawa	40,770	.....	39,270	.....
Burbank	47,545	.....	48,285	.....
Other Osage Fields	32,990	.....	33,030	.....
Cushing and Shamrock	22,820	.....	22,860	.....
Bristow and Eastern Bristow	30,910	.....	30,990	.....
Cromwell	21,070	.....	22,220	.....
Papoose	13,210	.....	13,990	.....
Garber	49,010	.....	66,010	.....
Blackwell-Braman	9,685	.....	11,295	.....
Davenport	20,845	.....	20,520	.....
Thomas	16,390	.....	16,665	.....
Northern Miscellaneous	103,265	.....	102,165	.....
Southern Fields	63,485	.....	62,185	.....
Total Oklahoma	471,995	.....	489,485	.....
North Louisiana	45,300	.....	44,853	.....
Arkansas—				
El Dorado and Calion	8,020	.....	8,035	.....
Smackover Light	21,340	.....	21,600	.....
Smackover Heavy	.....	175,455	.....	172,655
Stephens and Nevada	3,060	.....	3,095	.....
Total Arkansas	32,420	175,455	32,730	172,655
North Central Texas	170,365	.....	167,500	.....
Powell	36,600	.....	36,200	.....
Mexia, Currie, Richland, etc.	19,070	.....	18,190	.....
Wortham	13,440	.....	14,840	.....
Kansas	103,620	.....	105,490	.....
Total Mid-Continent Area	892,810	175,455	909,288	172,655
Gulf Coast	.....	96,072	.....	95,430
Southwest Texas	.....	41,795	.....	41,435
Eastern	105,500	.....	105,775	.....
Rocky Mountain Area	109,102	.....	104,321	.....
California—				
Santa Fe Springs	53,000	.....	53,500	.....
Long Beach	109,000	.....	107,000	.....
Huntington Beach	45,500	.....	46,000	.....
Torrance	5,000	27,500	5,000	27,500
Dominguez	26,000	.....	26,000	.....
Rosecrans	25,500	.....	25,000	.....
Inglewood	26,000	42,000	26,000	44,000
Remainder of State	40,000	238,000	39,000	239,000
Total California	330,000	307,500	327,500	310,500
Total United States	1,437,412	620,822	1,446,884	620,020
Grand Total		2,058,234		2,066,904

→ **Total Decrease 8,670 Bbls.; Light Oil Decrease, 9,472 Bbls.** ←


The OIL and GAS JOURNAL'S
WEEKLY GRAPH
showing daily average
ESTIMATED PRODUCTION
and daily average
LIGHT OIL OUTPUT
Tops of Lines Indicate Figures
DAILY AVERAGE PRODUCTION IN BARRELS
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
TOTAL OUTPUT DAILY
1925 Production
1923 Production
1924 Production
1925 Light Oil Output
Burbank peak—1923 121,764 bbls.
Peak of U.S. July 14, 1923 2,320,514 bbls.
Huntington Beach peak 1923—115,000 bbls.
Santa Fe Springs peak.—1923— 342,000 bbls.
Long Beach peak 1923 210,000 bbls.
Powell's peak Nov. 13, 1923 354,993 bbls.
Salt Creek peaks 1923 Oct. 4 Nov. 22 and Dec. 29 130,000 bbls.
Tonkawa peak, 1923 112,332 bbls.
Stroud peak June 1, 1924 24,793 bbls.
Cromwell peak, Aug. 12, 1924 65,497 bbls.
Peak of U.S. Aug. 23, 1924 2,351,391 bbls.
Tonkawa Deep Sand (1st peak Sept. 13, 1924 88,607 bbls.
Smackover peak May 31, 1924 151,305 bbls.
Burbank 1924 peak 111,865 bbls.
Second Deep Sand (Wash. Dec. 22, 1924 89,363 bbls.
Wortham Field discovered Nov. 22, 1924
Scale For LIGHT OIL OUTPUT DAILY

Oklahoma Refined Prices Are Steady

Gasoline Market Continues Firm Despite Lack of Spot Buying. Fuel Oil Increases in Strength. Refiners in Good Position

By Neil Williams

Despite the lull in buying activity, the Oklahoma (Group 3) refined market remained comparatively firm the past week. Except for a few minor advances or declines, prices were unchanged. A slightly greater strength developed in fuel oils.

Only the purchase of 100 cars, or approximately 800,000 gallons, of 64-66 375 gasoline kept the week from being entirely uneventful. However, this purchase was for shipment over a period of 60 days. The gasoline was bought by a Tulsa broker at a reported price of 12⅞ cents. It was generally reported that it was for some large exporter.

A few price concessions, especially in the U. S. Motor (58-60 437) gasoline were offered by some refiners during the week but these were not taken as a true indication of market conditions. However, offers of gasoline for shipment over the remainder of the month were more plentiful and at lower prices than those at which purchases were made the previous week.

The fact that refiners were able to hold spot prices in the face of the extreme sluggishness of gasolines was taken as another indication that they are in an especially good position at this time. This is borne out in the monthly refinery review appearing on another page of The Oil and Gas Journal which shows that crude runs to stills on December 1 were nearly as low as at any other time this year and were more than 8,000 bbls. less than on December 1 a year ago.

The decrease in runs during November was considered a direct reflection of efforts on the part of refiners to hold down production of refined products this winter to bare necessities and thus maintain the strength of the markets. This was in contrast to the general situation last year when runs were increased during November resulting in refined prices slipping at this time.

Refiners, they explain, are attempting to hold down runs the next few months in order to maintain prices at a level by which they can recoup from losses sustained during the summer and early autumn because of poor markets. Reductions of runs during October was one of the important factors in making November a profitable month for refiners, it was pointed out.

REFINED MARKET BAROMETER

Although the week was generally uneventful, refined markets of the country on the whole continued firm to strong. Tank wagon advances of gasoline in some sections and expected increases in others resulted in a greater feeling of secureness in the gasoline situation, especially on the Atlantic Seaboard where marketing conditions have been improving for several weeks. Kerosene markets were stronger in nearly every section, reflected in additional tank wagon advances in the East and higher prices at refineries in other parts of the country. Colder weather in the Middle West and northern States caused an increased demand in furnace oils and distillates. Fuel oil and gas oil increased in prices generally although movements were not particularly active in some sections. Lubricating oils showed considerable activity in most areas, although red oils weakened on the Gulf Coast. Natural gasolines continued firm.

Mid-Continent—Mid-Continent refined markets were featured by the sudden show of strength of kerosene, fuel oil and gas oil in North Texas, occasioned by heavy local demand. As a result fuel oils, gas oil and kerosene were slightly stronger in other parts of the district. Spot gasoline movements were sluggish generally but prices continued firm. Natural gasolines also were steady with Grade C developing greater strength. Demand for lubricating oils continued active. Other products unchanged.

Atlantic Seaboard—Gasoline markets continued to improve with greater steadiness shown in tank wagon conditions. Kerosene was active, reflected in additional tank wagon advances. Fuel oil was stronger. Lubricants featureless but prices unchanged.

Pennsylvania—A better tone prevailed throughout the Pennsylvania refined market with refiners showing a tendency to refrain from price cutting. Kerosene and neutral oils were particularly strong. Stocks reported low. Cylinder stocks holding their own.

Chicago—Chicago refined markets quiet with few price changes except in fuel oil which was advanced. Furnace oil in demand with plants pushed to fill orders. Gasoline and kerosene movements fair. Lubricants firm.

California—General California refined situation unchanged but strength of markets of other areas expected to influence situation.

Gulf Coast—Red oil lubricating stocks were reduced because of inactive demand for these grades. Other products steady.

Although gasoline prices were steady the past week, market students pointed out that the market situation was facing a crisis Monday and Tuesday. Prices apparently have advanced as far as they will until something develops in the form of additional export or domestic buying, or advances materialize in the posted crude schedules of the Mid-Continent and tank wagon quotations in the Standard Oil Co. of Indiana territory.

For the past few weeks and until the last few days consumption and production have been maintaining a balance, according to market observers. However, the lull the last few days leads these observers to believe that unless more orders come in this week the market may suffer. Now, although runs have been reduced materially, the slowness of buying since the middle of last week has enabled production to gain a slight edge over consumption.

Declines Resisted

However, although the market may be in need of spot buying, resistance will be offered to any price declines because of two factors. First, the heavy future buying on the part of jobbers and marketers a week ago will enable many refiners to keep fairly busy filling these orders. The fact that most of these orders were at the present spot prices of 10¼ to 10½ cents will prove of benefit to refiners.

The second condition which will help refiners hold prices lies in the fact that buyers with yearly contracts are ordering out gasoline in substantial quantities now. This will help to remove surplus gasoline from refiners holding these contracts.

Much of this contract gasoline is being taken out at this time in expectation of a tank wagon advance by the Standard Oil Co. of Indiana soon after the first of the year, which would cut down on the margins of the jobbers who buy gasoline after a tank wagon advance.

However, refiners are skeptical of the future benefits of this present contract buying as it is enabling jobbers to fill storage enough to keep them out of the market if prices advance following a tank wagon increase. Jobbers probably will have taken out all the gasoline they need by the time a tank wagon advance materializes and thus may be able to run for several months without buying.

In this connection, it might be mentioned that jobbers are slower than usual about making contracts for their 1926 gasoline, which may indicate that buying the coming year may be on more of a spot market basis than in the past. At this time jobbers usually are actively bidding for contracts but so far there has been little interest shown along this line.

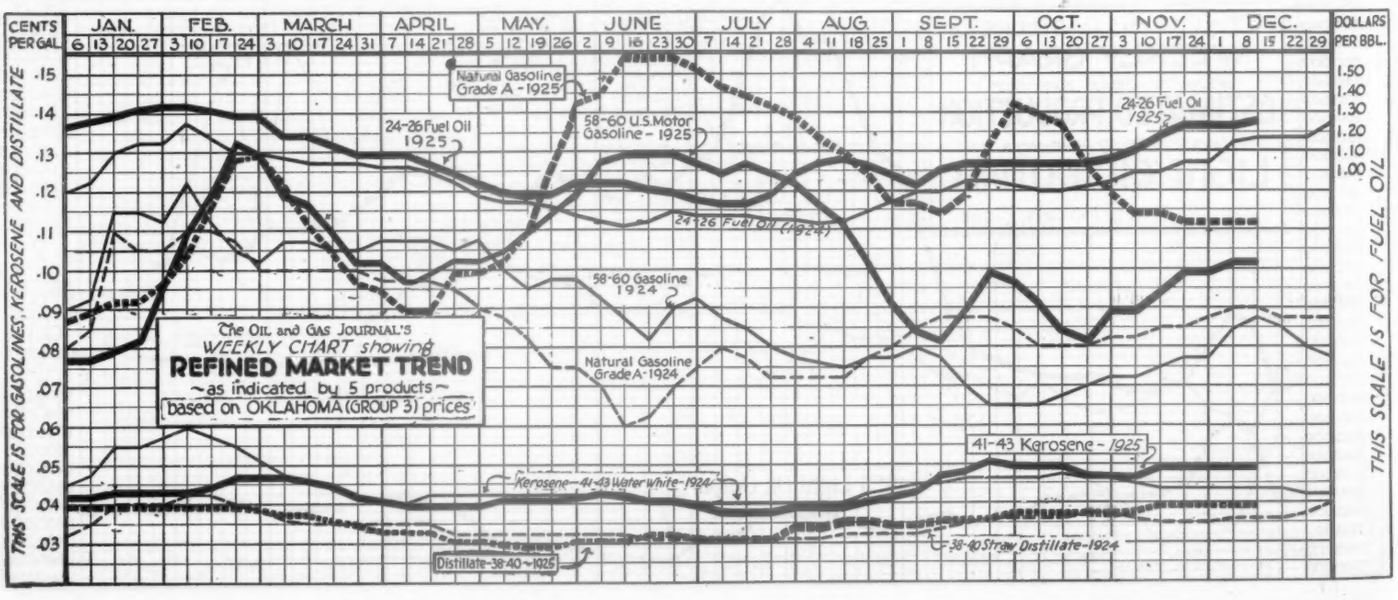
Colder Weather's Effect

Much of lack of spot buying of gasoline the last few days is blamed by refiners on the cold weather in the Middle West and northern States where much of the Mid-Continent's refined products are marketed. At this time of year, this bad weather naturally is reflected quickly in cutting down of gasoline demand.

This was shown especially in the 58-60 437 (U. S. Motor) gasoline, in which no interest developed at all during the week. However, as previously mentioned, prices remained fairly firm at 10¼ to 10½ cents although one or two offers are known to have been made as low as 10 cents. Markets of the 56-58 450 gasoline and the 50-52 450 naphtha were unchanged at 9½ to 9¾ cents and 9 to 9½ cents, respectively. Neither grade was active although the latter showed a slight improvement in demand.

A greater strength developed in the 64-66 375 gasoline than in any other grade as a result of the purchase of 100 cars mentioned previously. This purchase at 12⅞ cents immediately instilled

(Continued on Page 132)


CENTS PER GAL.
JAN. FEB. MARCH APRIL MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
DOLLARS PER BBL.
THIS SCALE IS FOR GASOLINES, KEROSENE AND DISTILLATE
THIS SCALE IS FOR FUEL OIL
Natural Gasoline Grade A - 1925
24-26 Fuel Oil 1925
58-60 U.S. Motor Gasoline - 1925
24-26 Fuel Oil (1924)
58-60 Gasoline 1924
Natural Gasoline Grade A-1924
24-26 Fuel Oil 1925
41-43 Kerosene - 1925
Kerosene - 41-43 Water White - 1924
Distillate-38-40 - 1925
38-40 Straw Distillate - 1924
The Oil and Gas Journal's WEEKLY CHART showing REFINED MARKET TREND as indicated by 5 products based on OKLAHOMA (GROUP 3) prices

Position of California in Oil Industry

Pacific Coast Crude Laid Down in the East at $1.95 Per Bbl. Output Declining Very Slowly

By L. P. Stockman

The business analyst has certain unmistakable signs which precede periods of inflation and depression and these cycles, because they are predicated on many nearly infallible indications, are fairly regular. The most successful prognosticator, of course, has certain limitations. This is particularly true in the petroleum industry where a single development voids carefully made estimates. The discovery of a new oil field, or the extension or opening up of a deeper horizon in a producing area, are just a few of the handicaps which cannot be foreseen. The present rather unsettled condition within the industry is, of course, due to overproduction not only in California but throughout the country in general. We cannot possibly have any complaint on the general economic conditions during the past year, and, since we are now apparently entering a period of prosperity, we can anticipate further improvement in general conditions.

In California, during the first nine months of this year, a total of 595,779,089 gallons of gasoline has been sold to consumers and, while the price to the refiner has not been very favorable, from a quantity standpoint, sales have been quite satisfactory.

Gasoline sales on the Pacific Slope for the year to date are running approximately 20 per cent ahead of last year, while commercial sales of fuel oil, excluding exports and intercoastal shipments, are also in excess of the distribution during the corresponding period last year.

The Next Six Months

In view of this rather favorable economic condition, a general survey of the situation for the next six months would not be inappropriate. The most important factor, of course, is crude production and the ability to assimilate it to advantage. One of the most interesting developments during the past few years has been the effect which each new field discovered has exerted on the general policy. During 1923, when the big fields of southern California were gushng forth their huge daily flow, several hundred producers of heavy crude were forced to shut down due to the undesirability of this quality oil and the resulting cut in prices. The demand at that time was for light refining crude, a considerable portion of which was going east. A little later, due to a sharp decline in light oil production and also to the fact that some rather heavy committments had been made, pipe line companies began bidding again for heavy oil.

As late as January of this year, heavy crude was commanding fairly high prices but, with the advent of Inglewood a few months later, low grade crude was again classified as undesirable. It has since remained in this category and will probably continue to do so until the demand for light oil exceeds the supply.

It is my personal opinion that California will continue to influence eastern markets to a more or less extent during the entire year of 1926 and possibly beyond that time. Many well informed operators are not in accord with this deduction but it is nevertheless apparent that California and the normal Pacific Coast markets will not be able to assimilate the entire State's production, much less draw on storage. This is quite evident when one makes a minute study of the present production of each field and attempts to arrive at a settled production figure.

Crude Decline Slow

The only fields in the State today which can absolutely be expected to register appreciable declines are Inglewood, Rosecrans, Long Beach and Ventura. A check of the other producing areas indicates that they have already settled to such an extent that future drops will be of a minor character. Several of the older fields, on the other hand, have excellent prospects of developing new producing horizons, while others are still being extended at frequent intervals. As a single illustration of each, the Midway-Sunset and Elk Hills areas might be cited. Long Beach is also experiencing a minor extension boom which will probably have a tendency to stabilize production in this area and stave off any further decline for several months. The Ventura Avenue Field in Ventura County, near the city of that name, has shown a remarkable increase during the past few months due not to the development of a heretofore unknown deep zone but rather to a more comprehensive and intelligent drilling campaign.

The Associated Oil Company started the ball rolling early this year by deciding to a do a little pioneering in order to determine the thickness of the producing sands. The result was the completion of a gusher from the 5,500-foot level. Previous to this time operators were satisfied with a penetration of a few hundred feet but immediately started redrilling and deepening comparatively small producers.

Fortunately, the acreage is held in large blocks, the entire proven area being controlled by the Associated, General Petroleum and Shell Oil Companies. Increased drilling and the maximum penetration now being secured is therefore directly responsible for the gain being shown by this area. The present output is running around 30,000 barrels a day and, since operators seem to be easing up a bit, production should hold rather steady for the next few months.

The Midway-Sunset area is still an unknown quantity as far as the potentiality of the Obispo zone is concerned, but something definite along this line should be determined shortly, as there are now about 10 wells on the way down. If the Maricopa brown shale should prove commercially productive in this immediate area, and it looks as though it will, there is no reason why it should not be equally as desirable at other points. This is of paramount importance as it may lead to a good deal of deep drilling to test out the formations in other valley fields. The Elk Hills Field, opened in 1919, has returned to life and completions by the Gross Drilling Company and other operators have added several hundred acres more to the producing area during the past 60 days. As a result of this extension the field will reflect an increase in both production and development work. No very great change, however, is anticipated, although the daily output may be boosted up 5,000 or 6,000 barrels a day, as the result of the completion of some 8 or 10 new wells. In addition to this extension work, it is quite likely that some deep drilling will be done in an effort to develop another producing horizon.

Inglewood to Decline

Inglewood is expected to show the largest decline of any of the present fields during the next six months, although there has been very little change during the past three weeks. It is still hovering around 70,000 barrels a day due to the fact that new wells are practically offsetting the decline. Future completions will be less numerous, however, and one can expect the district to resume its decline which has been temporarily arrested during the past few weeks. The drop from now on, of course, will be rather small, when compared with the decline registered immediately after the peak of 116,000 barrels was reached, but it should settle down to around at least 40,000 barrels a day early next year.

The statement made above that California would continue to market part of her output east of the Rockies during 1926 was based principally on the belief that crude production in California would continue at a fairly high rate and that improved conditions along the Atlantic Seaboard would warrant the shipping of crude, fuel or refined oils. The amount to be shipped, of course, will not be large by any means but it should be fairly consistent with a possible falling off late in the year. It would not only be foolish but hazardous as well for one to undertake to estimate production and probable conditions for an entire year ahead, because of the many changing factors which cannot be foreseen or taken into account. The following schedule, showing the production during the past three months and estimated output during the next few months, is submitted with a full realization that one new development will make it look ridiculous:

	Barrels
September	668,000
October	645,000
November	645,000
December	635,000
January	630,000
February	625,000
March	625,000
April	620,000

Allowances Made

The above estimates allow for an increase at Long Beach, Elk Hills and Ventura and a gain at Midway-Sunset, due to the development of the Obispo zone out in the Maricopa Flats. Due allowance has been made for a drop at Inglewood and, while I am of the opinion that there is an excellent possibility of developing deeper production in this area, this has been discounted temporarily because of the fact that operators are wisely holding up unnecessary deep drilling. It does not look as

(Continued on Page 78)

SITUATION IN CALIFORNIA

Crude oil production in California is not expected to show any precipitous drop but may, on the other hand, hover around 600,000 bbls. a day for some time, due to extension work and deeper drilling.

Shipments of gasoline and fuel oil to Atlantic and Gulf Coast ports will continue during 1926, with a possible falling off during the summer followed by a resumption in the fall.

California operators are playing a waiting game and are therefore reluctant to part with any considerable amount of crude or gasoline. Notwithstanding the fact a contract was recently signed calling for the delivery of 6,000,000 bbls. of fuel oil, California operators are not sacrificing prices on this commodity to get rid of it. Several companies are not even interested at present.

Drilling and wildcat work is on the increase and this development work should result in a stabilization of production.

It is interesting to note that since the accompanying article was written by Mr. Stockman, a 25-bbl. show of oil has been found in a wildcat test 40 miles due north of San Francisco, near Petaluma, Sonoma County, as reported in The Oil and Gas Journal of December 3.

Refinery Runs Near Low Point of Year

Crude Runs to Stills on December 1, 7,235 Barrels Less Than on November 1. Only 3,440 Barrels Greater Than on January 1

By Neil Williams

For the second consecutive month showing a decrease, crude runs to stills of Mid-Continent refiners on December 1 were lower than on the first day of any other month this year except January 1 and were 7,235 bbls. less than on the same date of 1924.

Total runs on the first day of this month as compiled by The Oil and Gas Journal were 375,975 bbls., a decrease of 7,250 bbls. from the daily throughput on November 1. This lacked only 3,440 bbls. of equaling runs of January 1, the day on which refinery operations were at their lowest point this year.

In addition to this, December 1 was the first time this year that crude runs to stills were less than on the same date of 1924. Although a number of times this year crude runs were decreased, the general trend has been upward and the reductions never were great enough to bring refinery operations as low as at any time during the previous year. The throughput on December 1, 1924, totaled 383,210 bbls., which until that time was a record.

The fact that crude runs were less than a year ago was interpreted by market students as being an important development in market conditions, the unusually strong prices for refined products being a direct reflection of this situation. It also further emphasized the efforts of Mid-Continent refiners to hold down operations to meet only their winter requirements.

MID-CONTINENT REFINERY OPERATIONS

Table No. 1

(Based on plants December 1, 1925, and November 1, 1925)

	*No. Plts. Dec. 1	Capacity	Plts. Op. Dec. 1	Daily Runs Dec. 1	Plts. Op. Nov. 1	Daily Runs Nov. 1	Daily Decrease Dec. 1
Oklahoma	58	268,000	47	163,880	48	170,550	6,670
North and Central Texas	46	177,100	37	82,375	38	85,625	3,250
†Kansas	26	129,900	19	32,250	18	30,800	‡1,450
North Louisiana	6	37,500	6	30,000	6	30,300	300
Arkansas	11	34,000	9	17,470	10	16,950	‡1,520
Total	147	646,500	118	375,975	120	383,225	7,250

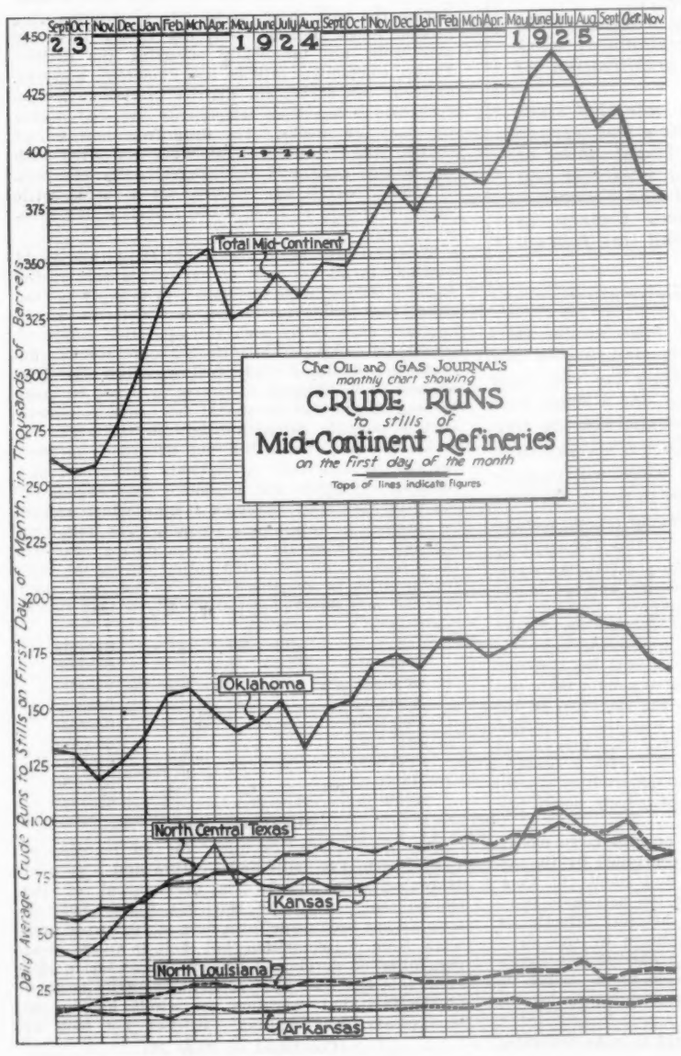
*Does not include 109 plants which have been shut down one year or longer.
†Includes two Missouri plants.
‡Increase.

Table No. 2

(Based on plants December 1, 1925, and December 1, 1924)

	*No. Plts. Dec. 1,'24	Capacity Dec. 1,'24	Plts. Op. Dec. 1,'24	Daily Runs Dec. 1,'24	Daily Decrease Dec. 1,'25
Oklahoma	58	258,200	52	173,000	9,120
North and Central Texas	45	164,250	40	88,285	5,910
†Kansas	27	135,300	21	78,925	‡3,325
North Louisiana	8	37,300	6	29,100	‡900
Arkansas	15	36,700	8	13,900	‡3,570
Total	153	631,750	127	383,210	7,235

*Does not include 103 plants which have been shut down one year or longer.
†Includes three Missouri plants.
‡Increase.



The reduction in runs on December 1 this year was in direct contrast to conditions on the same date last year. On that date an increase of 18,035 bbls. daily was recorded over figures of the previous month. It also will be remembered that refined markets at this time last year were softer and on the verge of a decline which came later in the month as a result of the increased operations.

Representing a decline in daily runs of 39,600 bbls. in the last two months, the throughput on December 1 was 63,875 bbls. less than on July 1 when refinery operations were at their peak in the history of the Mid-Continent. The fact that the decrease shown December 1 was not as great as that of November 1, which was 32,500 bbls, can be attributed largely to the heavy export demand for gasoline during November and the consequent better market conditions.

Crude Situation Tight

Although usually the continued reduction in runs would result in a softer crude situation, the fact that the reduction December 1 was comparatively slight and that crude production declined some prevented any great change in the situation. This, coupled with the continued policy on the part of refiners to store the surplus crude instead of releasing it to the large purchasing companies, caused market students to continue to look for an early advance in crude prices.

Actual figures, based on November 28 crude production reports of The Oil and Gas Journal, showed that on December 1 Mid-Continent refiners were running 34.7 per cent of the crude production, including the Smackover heavy oil. This represented a decline of only .5 per cent from the figures of November 1 when 35.2 per cent of the crude was run by refiners. Considering only light oil, 41.2 per cent of the daily production was being run December 1 as against 42 per cent on November 1.

Kansas-Arkansas

Kansas and Arkansas were the only two States in which refiners increased runs, Kansas refiners boosting their throughput 1,450 bbls., and Arkansas 1,520 bbls. Oklahoma refiners reduced their runs 6,670 bbls., north and central Texas 3,250 bbls. and north Louisiana 300 bbls.

The increase was largely accounted for in Kansas by the Standard Oil Co., which boosted the runs at its Neodesha plant 1,300 bbls. However, two other plants, the Waite Phillips Co. at Wichita and the White Eagle Oil & Refining Co. at Augusta helped to swell the total. Decreases by six plants failed to offset this advance.

Arkansas' increase was accounted for mostly in a gain of 1,000 bbls. in the runs at the Lion Oil & Refining Co. plant at El Dorado. Including this plant, three refineries increased runs in Arkansas while only two plants decreased. The Root refinery and the Ouachita plant were the two which reduced operations, while the Lion, Cross and McMillan plants boosted runs.

Oklahoma Reductions

A reduction in daily runs of 4,750 bbls. by the Champlin Refining Co. at its Enid plant and the closing down of the Pure Oil Co. refinery at Cushing were principally responsible for the 6,670 bbls. decrease in operations of Oklahoma refineries. Eleven Oklahoma plants increased runs and 10 reduced operations but except for a few plants the changes were of little importance. Outstanding among the plants increasing runs was the Garber Refining Co. at Garber, accounting for a 1,400-bbl. gain.

The Pure Oil plant shut down two weeks ago for an indefinite period, officials of the company declaring they did not know when operations would be resumed. The plant of the Yale Oil Corp. was shut down on the first of the month to clean stills but operations have been resumed on a 500-bbl. daily average.

Operations of north and central Texas refineries were comparatively steady, slight decreases in runs at 11 plants offsetting increases at 7 other refineries by 3,250 bbls. Only one change in the lineup of operating plants was reported during November, that being the Primrose Refining Co. at Wichita Falls, which shut down. The biggest change in runs in Texas was by the Amarillo Refining Co. at Amarillo. This company reduced runs 1,500 bbls.

Only one change in operations was made among north Louisiana refineries, that being a reduction in runs of 300 bbls. by the Shreveport Producing & Refining Co. The Great Southern Refining Co. at Ardis still is running at low ebb but announces it expects to increase operations by the first of the year.

REFINING OPERATIONS IN OKLAHOMA

(Plants which have been in operation during the past year)

Name and Location—	Daily Capacity	Runs Dec. 1	Runs Nov. 1
Anderson-Pritchard, Cyril	1,200	800	800
Barnsdall Refining Co., Barnsdall	5,000	3,800	3,800
Bell Oil & Gas Co., Grandfield	3,000	1,200	1,000
Bolene Refining Co., Enid	5,000	2 700	2,750
Cameron Refining Co., Ardmore	3,900	3,100	3,000
Canfield Refining Co., Yale	500	150	150
Champlin Refining Co., Enid	16,000	9,000	13,750
Coleman-Nelson Corp., West Tulsa	2 000	Shut down	Shut down
Continental Oil Co., Sapulpa	7,000	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	2,500	1,000	650
Cushing Refining & Gasoline Co., Blackwell	1,500	1,000	1,000
Daisy Bell Petroleum Co., Wilson	2,000	Shut down	Shut down
Empire Refineries, Inc., Cushing	7,000	5,000	5,000
Empire Refineries, Inc., Okmulgee	3,000	3 000	3,000
Empire Refineries, Inc., Ponca City	6,500	6,000	6,000
Fairmount Refining Co., Fairmount	2,500	1,800	1,500
Garber Refining Co. (Omar)	3,000	3,000	1,600
Gilmer Oil Co., Ringling	1,000	1,100	1,000
Globe Oil & Refining Co., Blackwell	5,000	4,500	4,500
Hewitt Refining Co., Hewitt	1,800	790	750

(Continued on Page 114)

Recovery of Kerosene in 1924 and 1925

Greater Amount of Crude Run to Stills During This Year but Percentage of Kerosene Made Less Than During 1924

By Charles E. Bowles

In the first 10 months of 1925 we ran 617,000,000 bbls. of crude oil to stills and made 2,074,000,000 gallons of kerosene—or an average recovery of 8 per cent.

In the first 10 months of 1924 we ran 531,000,000 bbls. of crude to stills and made 2,044,000,000 gallons of kerosene—a recovery of 9.1 per cent.

In other words, in 1925 we ran 16 per cent more crude to stills and recovered 1½ per cent more gallons of gasoline.

And, back of these few figures, is one of the most interesting chapters in the story of our marvelous industrial development—the evolution of illumination (kerosene and electricity) and transportation (steam, electricity and gasoline).

These changing percentages in the recovery of kerosene and gasoline are merely symbolic of equally significant changes that are going on in other industries—and which are having a tremendous bearing on the entire oil industry, and especially the refining end.

Undoubtedly the outstanding thing that has taken place in the past year, as shown in the accompanying table, is the change in percentage of kerosene recovery in practically every refining area in the entire country.

Change in Mid-Continent

For example, the Mid-Continent refineries recovered 9.3 per cent kerosene from all the crude they ran to stills in the first 10 months of 1924—and 8.1 per cent in 1925. This is a decrease of almost 13 per cent in recovery. The Kansas-Oklahoma refineries dropped from 10.0 per cent to 9.2 per cent. The North Texas refineries dropped from 8.2 to 6.5 per cent. They ran 5,000,000 bbls. more crude and made 5,000,000 gallons less kerosene. The Arkansas-North Louisiana refineries dropped from 7.0 to 4.3 per cent. They ran 3,000,000 bbls. more crude and made 5,500,000 gallons less kerosene.

In the first 10 months of 1925 the Texas Gulf Coast ran almost 18 per cent more crude to stills—and made 1½ per cent more kerosene than during the first 10 months of 1924.

The Louisiana Gulf Coast, in the first 10 months of 1925, ran over 38 per cent more crude to stills than during the first 10 months of 1924—and made 12 per cent less kerosene. In figures, this area ran almost 12,000,000 bbls. more crude to stills and made over 20,000,000 gallons less kerosene.

In the first 10 months of 1925 California ran almost 21 per cent more crude than during the first 10 months of 1924, and made 3 per cent less kerosene. In figures, this means that California ran 28,000,000 bbls. more crude to stills and made over 7,000,000 gallons less kerosene.

Shift In Markets

Nothing could be more significant of the far-reaching changes that are going on n these major refining areas. And no refineries, in areas like the Mid-Continent, Gulf Coast and California, can afford to "view with complacency" the unmistakable shift in the markets that such current records indicate.

In the Indiana-Illinois area, 22 per cent more crude was run to stills and 6 per cent more kerosene was made.

The Rocky Mountain area showed a small decline—from 8.7 to 8.4 per cent.

And in the Pennsylvania area—"the birthplace of coal oil"—they ran over 2,500,000 bbls. more crude to stills—and made almost 2,000,000 gallons less kerosene.

Only on the East Coast—with its large markets among the less forward nations of the world—did the percentage of kerosene recovered increase. Here they ran 4,000,000 bbls. less crude to stills—and made 10,000,000 gallons more kerosene.

The relation between the production of kerosene and the amount carried in storage in the different refining areas is even more interesting than the variations in the percentage of kerosene recovered in the different areas:

Area—	Per Cent of Prod.	Per Cent of Storage
Mid-Continent	31	8
Gulf Coast	26	34
California	11	21
Rocky Mountain	3	4
Eastern	39	33
Total	100	100

Southwest Big Producer

The Southwest (Mid-Continent and Gulf Coast) is easily both the largest producer and largest storer of kerosene, with a total of 47 per cent of the total output and 42 per cent of the total storage.

The Arkansas-North Louisiana area is never a heavy carrier of stocks of any refined products. Its products are promptly sent to other areas, especially the Gulf Coast, and in the matter of kerosene, during the first 10 months of 1925, only in September did this area have a million gallons in storage at the end of the month. Their average storage amounted to about 10 days of their output of kerosene as compared with, for instance, the Gulf Coast which carried an amount equal to about 90 days of its refinery output.

It is rather surprising to note, from the accompanying table, that October 31 the Texas Gulf Coast was carrying almost 50 per cent more kerosene in storage than the Atlantic Seaboard—or that California was carrying slightly more than the Atlantic Seaboard, which is easily the largest "consumer" of kerosene.

The Mid-Continent refining areas have fared well in the matter of kerosene storage with stocks very substantially smaller at the end of October than at the beginning of the year.

In the United States kerosene is slowly "passing" as an illuminant—and gaining a foothold in the fields of power and heat. In these new fields it finds as competitors, electricity (coal and steam), steam, fuel oil, gasoline and a growing line of motor fuels.

Gasoline Monopoly

In our industrial development first one and then another product has enjoyed a "natural monopoly." For almost a century steam enjoyed a monopoly as a source of power for our railroads and in our factories. For well over a quarter century kerosene enjoyed an almost complete monopoly as a source of light—and, in some of our foreign countries, this monopoly may last for a century.

Today, gasoline enjoys an almost complete monopoly as a fuel for internal combustion engines. And the motor vehicle industry is aggressively entering the field that was first monopolized by our steam railways, and later divided by the entrance of the electric railway—urban and interurban.

In the rapidly increasing complexity of our industrial fabric, kerosene is slowly "finding its place"—but it is today in the second cycle of its history.

As a fluid, it is a source of light, heat and power—and its future usefulness to the industries of the world will lie largely in the hands of technicians, engineers and inventors whose devices will find progressively higher uses for it.

Crude Oil Run to Stills and Production, Consumption and Stocks of Kerosene for the First 10 Months of 1924 and 1925.

Areas	Crude Run to Stills Barrels	Kerosene Recovery Per Cent	(1) Production Gallons	(2) Consumption Gallons	Stock January 1	Stock October 31
Southwest—						
Kansas-Oklahoma:						
1924	64,474,514	10.0	272,380,100	264,109,212	17,602,348	25,873,245
1925	82,511,780	9.2	320,206,205	335,317,817	32,115,612	17,004,000
Texas, North and Central:						
1924	25,251,921	8.2	87,340,574	96,660,636	22,339,761	13,019,699
1925	30,231,593	6.5	82,448,404	89,402,513	16,563,109	9,609,000
Arkansas-North Louisiana:						
1924	10,380,125	7.0	30,418,169	30,521,534	1,115,016	1,011,651
1925	13,330,211	4.3	24,936,472	25,869,662	1,193,190	260,000
Total Mid-Continent—						
1924	**100,106,561**	**9.3**	**390,138,852**	**391,291,382**	**41,057,125**	**39,904,595**
1925	**126,073,584**	**8.1**	**427,591,081**	**450,589,992**	**49,871,911**	**26,873,000**
Texas, Gulf Coast:						
1924	76,343,696	11.3	363,284,066	318,873,262	35,254,355	79,665,159
1925	89,717,656	9.8	369,997,604	359,960,111	82,096,507	92,134,000
Louisiana, Gulf Coast:						
1924	30,519,989	14.5	185,211,222	199,809,754	44,746,458	30,147,926
1925	42,207,033	9.3	164,812,974	177,693,395	35,690,421	22,810,000
Total Gulf Coast—						
1924	**106,863,685**	**12.2**	**548,495,288**	**518,683,016**	**80,000,813**	**109,813,085**
1925	**131,924,689**	**9.6**	**534,810,578**	**537,653,506**	**117,786,928**	**114,944,090**
Total Southwest:						
1924	206,970,046	10.8	938,634,140	909,974,398	121,057,938	149,717,680
1925	257,998,273	9.0	962,401,659	988,243,498	167,658,839	141,817,090
California—						
1924	123,296,895	4.5	231,829,296	223,675,181	30,227,403	38,381,518
1925	151,102,496	3.5	224,494,981	197,544,451	42,198,470	69,149,000
Rocky Mountain—						
1924	22,845,579	8.7	83,751,740	84,176,183	6,651,316	6,226,873
1925	21,582,645	8.4	76,592,807	74,178,799	9,203,990	11,618,000
Eastern (East of Miss. River)—						
East Coast:						
1924	113,001,249	9.8	463,467,621	463,664,678	72,878,573	72,681,516
1925	109,027,027	10.3	473,616,914	478,197,574	71,088,660	66,508,000
Pennsylvania:						
1924	18,294,636	15.9	121,868,181	122,845,254	13,081,478	12,104,405
1925	21,006,631	13.6	120,010,057	123,112,535	12,759,478	9,657,000
Indiana-Illinois:						
1924	46,401,079	10.5	204,205,090	214,491,439	39,298,959	29,012,610
1925	56,418,633	9.1	216,772,519	216,436,861	35,916,342	36,252,000
Total Eastern:						
1924	**177,696,964**	**10.6**	**789,540,892**	**801,001,371**	**125,259,010**	**113,798,531**
1925	**186,452,291**	**10.4**	**810,399,490**	**817,746,970**	**119,764,480**	**112,417,000**
Total United States—						
1924	**530,809,684**	**9.1**	**2,043,756,068**	**2,018,827,133**	**283,195,667**	**308,124,602**
1925	**617,135,705**	**8.0**	**2,073,888,939**	**2,077,713,718**	**338,825,779**	**335,001,000**

(1) Domestic production only. Does not include imports.
(2) Domestic demand plus exports, minus imports, for Atlantic Coast, Gulf Coast and California, which are affected by imports and exports of kerosene. The "inland" areas are not affected by imports and exports.

Hutchinson County Leading Panhandle Producing Areas

FORT WORTH, Tex., Dec. 5.—Hutchinson County, in the Texas Panhandle, has now taken the lead as the banner oil producing county of the district, surpassing Carson County which has been in the lead ever since production was first discovered in the Panhandle. Hutchinson County now has a daily output of 2,720 bbls. average as compared with an average from Carson County of 2,465 bbls. daily.

This week reports three new completions in Hutchinson County, all of which are producers with a total new flush production of 555 bbls. daily. The largest of these is the Whittenburg No. 1 of Gibson and others on the bank of the Canadian River which has a flush output of 240 bbls.

Eyes of Oil Industry Are Always Awake

Important Part Played by the Scouts in Protection of Legitimate Operations. Alertness and Accuracy Essential Qualities

By C. D. Lockwood

While herding his dilapidated mechanical contrivance of popular make along one of northern Oklahoma's more or less improved highways not long ago, a young man who is employed by one of the larger producing concerns in the Mid-Continent Field to keep his eagle eye open and report on everything that transpires, coincides or happens in his district, noticed a car pull out of a farmer's yard and head rapidly in the other direction. This wouldn't have meant much except that his company held the lease on this farmer's property and the expiration date was almost at hand, along with several others in that region.

Noting that the car belonged to a rival company, this scout promptly turned off the main road and investigated. On his return to town he phoned his chief that the other concern was resorting to the lowly tactics of "top-leasing," that is, obtaining leases on the larmers' land to begin when the present leases expired, without giving the leaseholders an opportunity to renew thier leases. Having informed the chief scout he visited the offices of the company which he thought was resorting to such nefarious practices and told them what a low-down bunch they were. But he was told that something must be wrong, and investigation

revealed the fact that an arrangement had been made between the leasing departments of the two companies for a little cooperation in renewals and nobody was attempting to put anything over. The mistake had been made in not informing the scout of this arrangement, and needless to say he was not "bawled out" very much for keeping on the job.

When you put anything over on a scout, if he is worthy of his job and has been seasoned by a little experience, you arise early in the morning and stay on duty all day. Then you lie awake all night for fear he will put it back on you with interest. The "Eyes of the Oil Industry" are always awake.

Tribute to a Scout

A tribute paid by the dean of oil writers, Patrick C. Boyle, founder of The Oil and Gas Journal, and himself one of the early scouts to James C. Tennent, another pioneer in this branch of the business, sounds more like a list of qualifications for a highly successful president of a large concern:

"* * * a fine specimen of vigorous manhood, qualified by character and experience for any position in the oil fields. As a producer of oil he possessed a prac-

tical knowledge of the liberal arts associated with the construction and operation of oil wells. The motion of the beam, the sound of escaping steam, conveyed to his acute senses lessons, in terms known only to the initiated, lost to all others. By this happy faculty, movements within enclosed derricks were accurately interpreted. His system for estimating well depths by time and speed of the movement of the cable in drawing tools approached perfection. What he saw he believed, and believed little he could not see and demonstrate. He was therefore both rumor and fool-proof. In temperament he was cool, serious, thoughful, taciturn and truthful. Schemes without number to confuse or get him off the job uniformly failed."

Like Kipling's famous poem "If," these qualifications combined in one man would apparently make almost a super-man and yet if a scout performs all of the duties imposed upon him in many districts where active leasing and drilling is going on, and performs those duties well, he needs just about all of the characteristics outlined in the foregoing eulogy.

There is no intention whatever to picture the average scout as an overworked

individual, struggling under a load of care that is gradually but surely sending him to an early grave. Some complaints are known to have been filed by chief scouts because their men take them to a neat trimming on the links when they come to town, and it is not to be presumed that the great national indoor sports, such as stud poker, the galloping dominoes and others, are languishing from neglect. Far be it from a scout to allow any such worthy institutions to die out for lack of support.

All in Day's Work

But consider some of the trifles that may distract his attention from such pleasurable pursuits. He is "carrying" in his book tickets on which are complete records of all wells in his district. He may have only a small number of these and again he may have several hundred. He may have a Cromwell Field, a Papoose Pool, and a Wewoka Field to watch over, while important wildcats and semi-wildcats are drilling in all directions. He has to watch these wildcats daily for any important oil or gas showings, and report by telephone every night to his chief if the district is especially active. A little delay when something important "breaks" means a direct loss of money to his company, sometimes amounting to hundreds of dollars. If any field in his territory attains the status of a market-breaker or looks as though it might develop into something of that caliber, the chances are he will be asked to report the production daily, by leases or even by wells. And if water shows up in quantities that threaten to drown out the oil, he will probably have to add the water output of each well to the other daily information that he is required to supply his home office. This is no exaggeration, for several companies in Tulsa have been getting a daily gauge on each well in the Garber Field, showing both the oil and water production of each producing well.

Naturally, all of this, combined with many other duties, would make it a physical impossibility for one man to cover several hundred square miles of territory each week to ascertain drilling depths of wildcats, new locations and other data too numerous to mention. So

the business has been systematized in local districts, and the scouts for various companies cooperate with each other to lighten the burdens. Once a week they meet and receive assignments of territory to cover during the following week, and to check with other scouts the information they have obtained. In this way duplication of work has been largely avoided and each company has been enabled to scout the entire States of Oklahoma and Kansas at a minimum of expense. Only in a few rare instances have scouts withheld from their fellows at these "check meetings" information which they have used to the advantage of their own company, and in those cases the scouts were summarily expelled from

the meetings. No outsiders are allowed to attend.

On Short Notice

Another little distraction from the afternoon of golf may occur at any time in the shape of a peremptory demand from the president or head of the land department or other official for a specific detailed report on some wildcat area or most any thing that he happens to be curious about. The order is telephoned by the chief scout to his man in the field with the nonchalant notice that it must be completed and back in the main office within two days, or three if the boss is liberal and isn't in a hurry. This means dropping routine work and hurrying away for the necessary data.

The person who envies the abundance of leisure time enjoyed by a scout should watch him "grabbing samples," as the work of collecting well cuttings is termed in the parlance of the oil fields. Some concerns have special men working in the geological department who performs these duties, while others depend upon the scouts for their samples or for help in cases requiring unusual diplomacy. Likewise, the scout is often called upon to collect logs, sometimes sending in each week with his well tickets the formation record of the hole drilled that

(Continued on Page 124)

SOME CHIEF SCOUTS OF THE MID-CONTINENT AREA

Left to right, top row: E. A. Bacon, Roxana Petroleum Corp.; Ralph C. Steinman, Sinclair Oil & Gas Co.; J. E. Buckley, Twin State Oil Co.; H. M. Mauldin, Pure Oil Co.; Harry Norris, Prairie Oil & Gas Co.; H. L. Curry, Shaffer Oil & Refining Co. Bottom row: George H. Lang, Carter Oil Co.; W. R. Thawley, Gypsy Oil Co.; G. A. Schwab, Waite Phillips Co.; Sam Martin, The Texas Co., and G. B. Reneau, Tidal Oil Co.

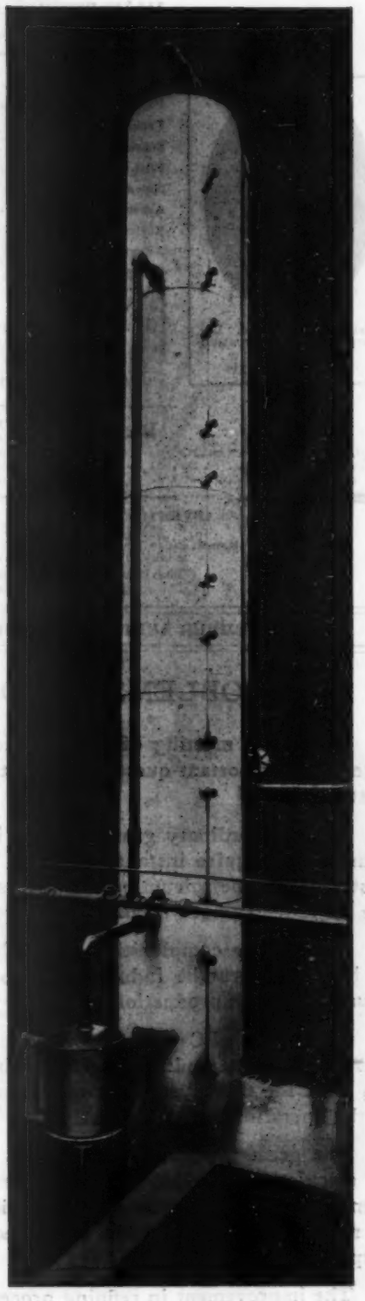
For low-cost gasoline

Choose the equipment that has demonstrated its superiority in every respect. Visit a Newton Plant.

Newton absorption plant equipment at the time of its introduction to the Oil Industry was instantly recognized as a big step toward efficient, economical manufacture of gasoline.

Today, by reason of constant improvements, Newton Equipment is regarded everywhere as the most highly perfected equipment on the market. Initial cost is lower for Newton Plants and maintenance is correspondingly low. Newton Plants are money makers for many wise operators who have bought them on a strictly comparative basis. Feature for feature, and cost for cost, Newton Plants are without a peer in their field. We ask you to make us prove this statement.

Newton Plants may be moved with full salvage value. They are as portable as it is possible to make absorption gasoline plants.



NEWTON FEATURES

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PROBLEMS AT LOS ANGELES

No annual meeting of the American Petroleum Institute has faced such important questions as that to assemble at Los Angeles next month.

The extraordinary growth of the industry develops new problems which require instant attention. The development of the industries using petroleum products puts an increasing demand upon the oil industry both in volume and variety of output.

Besides the complexities caused by the varying requirements of its consumers the industry has to deal also with unexpected situations in the production of its raw material.

The choice of California for the meeting place of the Institute this time was determined largely by the fact that the Pacific Coast has been for three years the disturbing and dominating influence in the operations of the industry.

The great production of the Los Angeles basin which upset all calculations in 1923 had effects much more lasting than was then supposed. The production shut in during that period, aided by new work and new fields, continued to maintain the California output at a high level.

The improvement in refining processes developed gasoline possibilities in much California oil theretofore considered out of the gasoline class. The Pacific Coast, with a supply greatly in excess of local demand, became a source of export, through the Panama Canal, not only to the Atlantic Seaboard but abroad.

First hand knowledge of actual conditions in California will be obtainable by visitors to the Institute meeting at Los Angeles under the most favorable auspices, the gathering affording opportunity for comparison of notes and comment by the leading representatives of the industry from all over the country.

All estimates and calculations for operations in the coming year will have to take into consideration the outlook on the Pacific Coast and it will be of the utmost value to have a clear understanding of the situation there by the industry as a whole.

The rapid evolution of refining methods which has made the product of the cracking processes the most desirable motor fuel, as first emphasized in a series of special articles in The Oil and Gas Journal recently, has so completely changed the manufacturing and marketing aspect that it is certain to engage the thoughtful attention of any assembly of oil men such as the Institute.

The reported improvements in the automobile engine and their relation to the quality of gasoline are also worthy of earnest consideration. The large part devoted by the Institute's Committee of Eleven report to the possible decrease in future years in crude and gasoline requirements for motor use through such engine changes shows that the Institute is alive to the possibilities and their effect on the oil industry's operations.

Point is given to the need for petroleum research in this and other regards, so frequently urged in the columns of The Oil and Gas Journal, by the announcement of the directors of the Institute of the donation of $250,000 by John D. Rockefeller for research purposes.

It was suggested in the issue of The Oil and Gas Journal of February 7, 1924, that, in view of Mr. Rockefeller's endowment of the Rockefeller Institute for Research, if the proposition for special research in petroleum were placed before him his interest would be manifested substantially.

His present gift pledging this sum to the Institute "for the initiation of a program of scientific research in petroleum" is designed to stimulate the active interest of the industry in this most important phase.

The fund will be available in annual installments of $50,000 for five years, "to be expended primarily in supporting research fellowships in scientific institutions—the recipients of such fellowships to engage in research of some problem of the physics, chemistry, or geology of petroleum oil."

The results of this research are to be freely available to the industry and to the public generally, according to the terms of Mr. Rockefeller's donation.

With this substantial foundation to build upon the Institute may be expected to develop an immediate working program of petroleum research that will complement the research activities in the related industries using petroleum products and together blaze the way for that more efficient use of petroleum energy which is the most practical conservation of our oil resources.

The report of the Committee of Eleven on conservation is itself expected to be a center of discussion at Los Angeles. Some of the comment on that report and Secretary Work's letter to the Institute asking for further information regarding conservation has provoked controversy which is almost certain to be ventilated at the annual meeting.

The formal action of the board of directors of the Institute in adopting a resolution endorsing the Committee of Eleven report and referring Secretary Work's letter to the committee is sufficient answer to the criticism that the Committee of Eleven did not represent the Institute.

This means, if criticism is renewed at Los Angeles, it must be on some other ground than that the report is merely the opinion of a single committee unapproved by the body that created it.

The controversy, if developed, will thus be narrowed down to the actual issue and kept there, which is as it should be. Nothing is to be gained by the industry by mere argument that leads to no conclusion except to give the political critics of the oil business fresh ammunition for attack upon it.

For this reason it is hoped there will be an unusually large and thoroughly representative attendance at Los Angeles so that the action taken by the Institute will be convincingly shown to the Government and the country to be the opinion of the vast bulk of the industry.

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Argentina's Government Refinery

It Will Begin Operations January 1 With a Daily Throughput of About 7,000 Bbls. Which Is Expected to Increase to 28,000 Bbls.

By Charles E. Kern

WASHINGTON, D. C., Dec. 5.—The new oil refinery erected by the Argentine Government to take care of its oil production will begin operation January 1, 1926, when the daily consumption of crude petroleum by this refinery probably will be about 1,000 tons or approximately 7,000 bbls. This plant has been erected by the Bethlehem Steel Corp. for the Argentine Government and will be an experiment in governmental management of an oil refinery. It is located in La Plata, Argentina, with another smaller refinery located in Plaza, Huincul, to take care of the production at that place.

The career of the Argentine Government in the oil business has been accompanied by considerable criticism by some Argentine citizens who believe that the Government should keep out of the oil industry, both in its production and refining branches. They are not inclined to think that the Government is adapted to carrying on a business of this kind in respect to which there is no special argument against private ownership so far as concerns the objects accomplished by the Government.

The fact that the new refinery was erected and installed by the Bethlehem Steel Corp. was subject for congratulation on the part of those who did not look favorably upon Government entering into business pursuits. They believe that a great American corporation will be able at least to start out this enterprise in a favorable way, although they still fear that politics may enter into the future management of the concern in a way to render it less likely to succeed than would be the case under some private ownership.

This new oil refinery will continue working under American management until October 1, 1926, when the refinery will be turned over to the Argentine Government. It is now estimated that the daily consumption of petroleum by the refinery probably will reach 2,000 tons by next October. If the present purposes of the sponsors for this enterprise are continued additional equipment will be installed and the capacity of the refinery raised to 4,000 tons of crude petroleum consumption per day.

Dependence on Foreign Oil

There have been statements by Argentine officials indicating that that country would be independent of foreign countries as regards petroleum products by 1928, but this opinion is not universally entertained by authorities there. According to refiners and local importers, Argentina will continue for some time to consume large quantities of imported petroleum. The Government is now engaged in considering the best means of distributing refined products. Whether the petroleum division will undertake this distribution or whether a separate organization will be created for that purpose has not yet been decided.

The main productive oil fields are located far to the south of La Plata. Ships bringing the crude oil from the Port of Rivadavia will unload at La Plata, where the refinery is located and then continue to Buenos Aires with cargoes of the refined product.

Production Increased

The petroleum produced by the fiscal oil wells of the Rivadavia district during 1924 is now reported by the Argentine Government as 2,934,062 bbls., as compared with 2,304,101 bbls. produced in 1923. The output of the fiscal wells at Plaza Huincal is given at 55,933 bbls. in 1924 and as 43,470 bbls. in 1923. The total production by the Government oil fields may be stated, therefore, to be approximately 2,989,995 bbls. in 1924, as compared with 2,347,571 bbls. in 1923.

The production was reported in cubic meters as follows: 1923—365,730.4 cubic meters; 1924—465,723.17 cubic meters for the wells at Rivadavia. The production at Plaza Huincal was given at 6,900 cubic meters in 1923, and 8,878.2 cubic meters in 1924. The oil dealers calculate 6.3 bbls. to one cubic meter.

The results of the Government topping plant for the two years are reported as given below. Quantities are expressed in cubic meters:

	1923	1924
	(In cubic meters)	
Amount of oil topped	43,061	76,017
Refined gasoline	3,867	7,934
Refined kerosene	125	252

The detailed output of the topping plant, as reported by the Government Petroleum Division, is given below:

	1923	1924
	(In cubic meters)	
Crude gasoline	3,933	8,062
Pure gasoline	1,446	3,340
Low grade gasoline	375	344
Rectified kerosene	1,953	3,527
Refined kerosene	1,204	2,424
Aviation gasoline	763	717

Consumption Keeps Mounting

The production of crude oil and the consumption of products of crude oil are forming a very interesting subject for the people of the Argentine at this time. Those who are hopeful of seeing the country supplying its own oil requirements have been face to face with mounting consumption that has upset many calculations. There is an increase of automobiles that is constantly drawing upon the resources of Argentine oil production. To the American oil industry the figures showing importations into the Argentine of coal petroleum and by-products as indicative of future exports to the Argentine, are of especial interest. The latest figures are for 1924, when there were imported into Argentina the following quantities of coal, petroleum and by-products:

Crude Oil for Refining

Section 45 of Customs Tariff	70,917,419 Kilograms
Fuel oil (Sec. 3270)	634,497,255 Kilograms
Residues (Sec. 3270)	13,094,245 Kilograms
Gasoline (66% in bulk, 42% in cases, 2% drums)	237,166,858 Liters
Kerosene	67,556,361 Liters
Gas oil	10,927,376 Liters
Lubricating oil (Sec. 2791, 2792)	21,936,694 Kilograms
Lubricating oil U. O. S.	4,059,978 Kilograms
Coke	24,012,900 Kilograms
Coal	3,229,392 Tons

Importations Are Expensive

The total expenditure of Argentina during the year 1924, using these figures, and at the lowest prices quoted in the local market for the year, was in excess of 202,000,000 pesos paper. Deducting the import duties paid for gasoline, kerosene, crude oil and lubricating oil, there remains a balance of about 185,000,000 pesos paper that is paid to foreign producers.

A study of the consumption of gasoline in Argentina in 1924 based on the number of motor vehicles in use makes it possible to forecast that the 1925 consumption will be in excess of 390,000,000 liters.

Government Makes Estimates

In the official bulletin of the Direction General of Fiscal Deposits, there appears the program of the Government workings for the four years' period 1924-1927, and in outlining the plan of work the statement is made that the new refinery at La Plata is to handle 4,000 tons of crude oil gravity 0.920 per day, that is to say about 4,347,826 liters beginning in July, 1926. In 1927 the refinery would handle 1,460,000 tons of crude oil, with the following estimated out-turns:

	Liters
Gasoline	155,240,520
Kerosene	103,075,700
Fuel oil, 1,209,923 tons, or	1,287,157,426
Gas oil, 73,331 tons, or	8,574,128.65

This would give the following percentages of each product:

	(Volume)
Gasoline	9,782%
Kerosene	6,495%
Fuel oil	81,109%
Gas oil	0,540%
Loss	2,074%

If the number of automobiles continue to increase, as it is logical to suppose it will, the total consumption of motor vehicles in 1927 will be in excess of 500,000,000 liters of gasoline, and if the new refinery at La Plata only produces 155,241 kiloliters, there will remain to be supplied 344,759 kiloliters or an amount equal to the output of two additional refineries such as is being built at La Plata. This, of course, presupposes an annual production in Argentina of 5,400,000 kiloliters of crude oil, if the country is to be self-sufficing in this respect.

U. S. Oil Leads

An authoritative source of information gives the total importation of crude petroleum into Argentina at 201,947 tons, of which the United States furnished 159,304 tons and Peru 42,618 tons.

Fuel oil imported into Argentina in the same year of 1924 amounted to 551,838 tons of which the United States furnished 202,601 tons and Mexico 349,237 tons.

The manner in which these activities are viewed by the people of Argentina is shown by the fact that recently certain members of the Argentine Congress have asked the executive to furnish full details of the cost and probable date of completion of the huge oil refinery now in course of construction at La Plata. This request for information has caused surprise because at the time the contract for the construction of the refinery was authorized a complete statement of its cost and probable profits was issued. It is understood that the original idea of the promoters of this plan was the expenditure of $14,000,000 (pesos) and afterwards there were some additions, amounting to about 50 per cent of the whole cost.

In Argentina as elsewhere the local demand for liquid fuel has risen during the last 10 years. All sorts and conditions of factories have changed from coal to oil. Thousands of new automobiles have appeared, and the consumption of petroleum and its by-products is increasing there by leaps and bounds. The general prosperity of the country lends itself to still further increasing demand without an equivalent increase in the productive oil fields of the country.

PETROLEUM SUPPLY AND DEMAND FOR FOUR MONTHS IS ANALYZED

By Charles E. Bowles

During the first 10 months of 1925 only October and August saw a reduction of the total petroleum stocks above ground.

In August total stocks were reduced 1,780,000 bbls.—and during October, 1,874,000 bbls., as compared with the preceding month.

October 31 total stocks stood at over 545,000,000 bbls., as shown in the accompanying table.

July 31 total stocks stood at over 548,000,000 bbls.—the largest that the industry has ever carried.

The past four months have seen a gradual drop in production from 67,318,000 bbls. for July to 64,273,000 bbls. in October. Imports during this period have averaged over 5,000,000 bbls. a month, thereby running the total supply of crude to over 2,360,000 bbls. a day in July and over 2,244,000 bbls. a day in August.

During July the demand was 62,954 bbls. a day less than the supply. During August demand exceeded supply by 57,424 bbls. a day. In September demand dropped to over 68,000,000 bbls., with the result that a daily average of 29,277 bbls. was added to stocks. During October supply stood at almost the

(Continued on Page 127)

Supply of and Demand for Petroleum and Its Products

	July	August	September	October
Supply—				
Domestic crude oil	67,318,000	66,887,000	64,708,000	64,273,000
Imports—all oil	5,847,969	5,332,646	4,903,464	5,314,873
Total supply	73,165,969	72,219,646	69,611,464	69,587,873
Demand—				
Domestic and export	71,214,424	73,999,787	68,733,151	71,462,596
Difference	1,951,545	*1,780,141	878,313	*1,874,723
Source of Difference—Increase in—				
1. Pipe line tank farm stocks	471,000	1,804,000	2,808,000	2,492,000
2. Crude oil at refineries	425,000	*3,592,000	*55,000	*2,627,000
3. Foreign crude not at refs.	26,000	*106,000	*71,000	*31,000
4. Refined products at refs.	1,029,545	113,859	*1,803,687	*1,708,723
Total change	1,951,545	*1,780,141	878,313	*1,874,723
On a Daily Basis—				
The supply was	2,360,193	2,329,666	2,320,382	2,244,769
The demand was	2,297,239	2,387,090	2,291,105	2,305,245
Surplus or shortage	62,954	*57,424	29,277	*60,476
Total Petroleum Stocks—				
(a) Pipe line and tank farm:				
East of California	273,206,000	271,479,000	269,582,000	269,369,000
California light	44,269,000	41,300,000	42,759,000	43,773,000
California heavy (1)	69,159,000	75,659,000	78,905,000	80,596,000
(b) Crude at refs. east Cal.	34,307,000	30,715,000	30,660,000	28,033,000
(c) Foreign crude not at refs.	916,000	810,000	720,000	708,000
(d) Refined products at refs:				
Gasoline (bbls.)	38,352,136	36,683,744	36,051,190	36,410,667
Other products (2)	88,120,520	89,902,801	88,731,638	86,663,438
Total liquid stocks	548,329,656	546,549,545	547,427,828	545,553,105

(1) Includes fuel oil in storage in California.
(2) Does not include fuel oil in storage in California.

Please Note—Decreases are shown by both * and black face type. Increases are in light face type.

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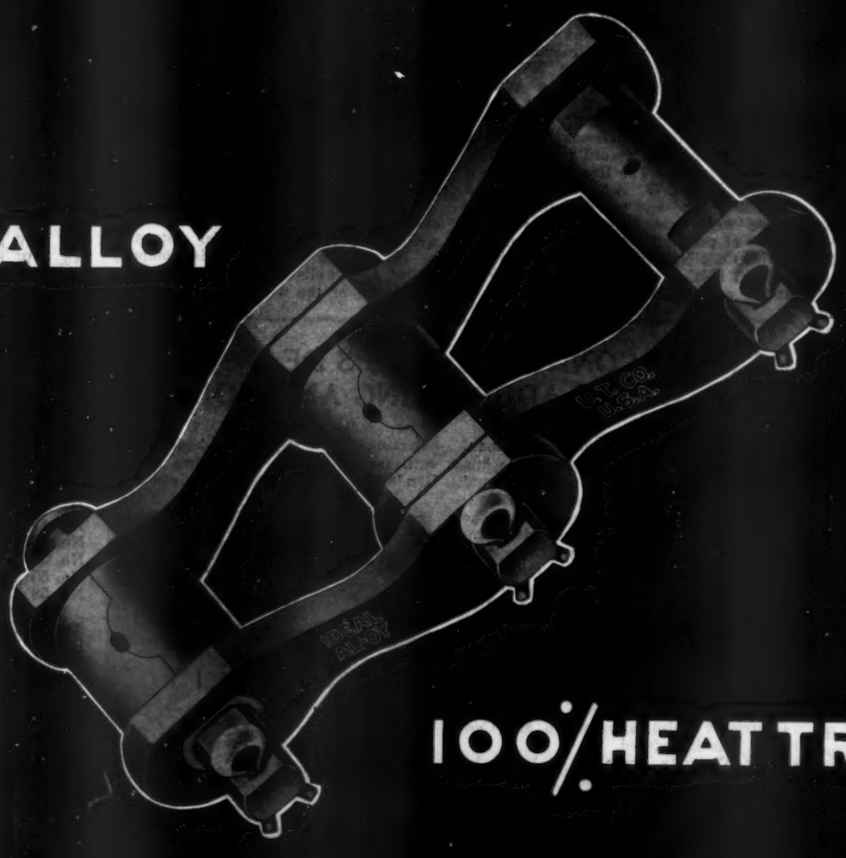

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THE NATIONAL SUPPLY COMPANIES

Garber Operators Get Good Return

Highly Productive Deep Sand Has Already Yielded $10,000,000 Worth of Oil. Development Cost High

By J. L. Dwyer

The most important oil activity that 1925 has brought to Oklahoma is the deep sand development in the Garber Field in Garfield County, where the Wilcox horizon is producing from a depth of 4,377 feet.

The Sinclair Oil & Gas Co. is entitled to the glory that attends the finding of this operation, for it was due to its perseverance that the discovery well was completed on April 4 of this year. The sand in the Sinclair Co.'s No. 25 Belveal well was touched at 4,377 feet and the well started flowing at the rate of 25 bbls. an hour. This production increased with deeper drilling and the following day the well was producing at the rate of 160 bbls. an hour, and the start of the Garber deep sand was made. Much water has passed under the bridge since that time and millions of barrels of oil have flowed into the tanks in this field. The Garber Field is an old producing district, and its history dates back to 1915 when the Sinclair interests opened the pool, but the 11 shallower producing sands are dwarfed by the importance of the staggering figures that represent the productivity of the Wilcox sand.

From the date of discovery until December 1, the deep sand at Garber has produced 4,235,075 bbls. of oil. The average gravity of the Wilcox oil produced at Garber is 43.5 degrees and the market price of this gravity oil is $2.35 a barrel. The multiplication process of these figures gives a total figure of $9,952,426.20 as the price paid by the pipe line companies for the deep sand oil produced at Garber up to December 1, 1925.

The cost of operating at Garber is estimated at $75,000 for each deep sand well completed. The 40 wells listed in the accompanying table yielded the amount of money given above, and at the estimated cost, they caused an expenditure of $3,000,000 by the operating companies. Taking a survey of the field as of December 1, it will be observed from these figures that on that date, the 40 wells had paid for themselves, and a surplus of $6,952,426 remained.

Vast Amount of Drilling

The vast amount of drilling necessary to the completion of the wells may be computed by figuring 4,300 feet as the average depth. The drilling of 40 wells 4,300 feet deep means that a total of 172,000 feet of actual drilling was necessary for the completion of these wells. Reduced to miles this illustrates that 32.6 miles of hole had to be made through the rocks to permit the fluid to reach the tanks.

Owing to the peculiar tactics of the field, and the surprises, both pleasant and unpleasant that it has allotted the companies operating there, any attempts at estimates, either as to the producing area, or the peak of production would be suicidal to the prophet. At this time the most prevalent conception of the geologists who have made an intensive study of the field seems to have established a fault running northwest-southeast and cutting the southwest corner of the northwest quarter of Section 18-22-3w, as described in last week's issue of The Oil and Gas Journal. With the small showing of the Roxana Petroleum Corp.'s No. 1-W Wolfe, in the SE corner of the NW quarter of Section 13-22-4w, it was thought that the northwestern boundaries of the field had been defined, but the location immediately north, (No. 2-W Wolfe), is a big well, and has resulted in several operations being started around it.

To date the Roxana Petroleum Corp. leads the field in the amount of oil produced from the deep sand. This company's Schroeder lease, the 160 acres comprising the southwest quarter of Section 18-22-3w, has placed 1,926,008 bbls. of oil into the tanks from eight wells. These eight wells cover the 80 acres comprising the west half of this quarter section. The theory of the probable north fault places its location diagonally across the east 80 acres, and this would leave five additional locations in area that seem very good. Since these figures were compiled, another deep well has been drilled in on the Schroeder lease, No. 9-W, in the SW cor. SE SW Section 18-22-3w, one quarter mile east of the No. 1-W. This well has a daily production of 2,911 bbls. at present and is not completed.

Roxana's Big Production

In the Wolfe lease, the Roxana Petroleum Corp. has a property which has produced 84,757 bbls. and the both of these leases give the Roxana a production of 2,010,765 bbls. from the deep sand, as its share for developing the field. A healthy reward that.

While at present the well which has produced the most oil of any of the Garber wells is the Roxana Petroleum Corp.'s No. 2-W Schroeder, in the NW Cor. SW SW, Section 18-22-3w, a quarter mile north and one location east of the discovery well, the Sinclair Oil & Gas Co. has a well which seems to be in a position to make a record for individual well production. The Roxana Petroleum Corp.'s No. 2-W Schroeder produced 833,839 bbls. up to the time these figure were assembled. In about two weeks of productive life, the Sinclair Oil & Gas Co.'s No. 19 Hartley has produced 225,803 bbls. of oil, and is still flowing at the rate of 12,000 bbls. daily.

In total production, the Sinclair Oil & Gas Co. is second to the Roxana, and there has been 1,312,737 bbls. of crude put into the Sinclair tanks. The most highly productive Sinclair lease at Garber is the Belveal lease, upon which the discovery well was drilled. The Belveal lease has made 493,293 bbls. up to November 30. The best well on the Belveal lease is the discovery well No. 25, which has put 392,743 bbls. into the flow lines. As mentioned above, the No. 19 Hartley in time will very likely pass the performances of these wells which at present rank above it in total oil produced, but this article is intended as a summary of past performances and not of predictions. The discovery well has a wonderful record, and for three months it's production remained at 2,500 bbls. daily. Sinclair's No. 20 Kisner, the well offsetting the discovery well to the east, has made a splendid amount of oil and its figure up to November 30, is 189,886 bbls. No. 22 Kisner has made 145,500 bbls. and No. 21 Kisner, 95,870 bbls.

Other Companies' Records

The Marland Oil Co. and Mid-Continent Petroleum Corp.'s School Land lease had made 891,306 bbls. from ten deep wells. The best well on the School Land lease, (the SE quarter of Section 13-22-4w) is No. 45 School Land, which has placed 510,570 bbls. to the credit of the owners. No. 41 School Land, the north offset to the discovery well has made 130,968 bbls.

The Healdton Oil & Gas Co.'s 40 acres, one quarter mile west of the discovery well, was just a little too far distant to be in the big money. This company drilled four wells on the lease, and the production of the wells is disappointing. The company has recovered 17,374 bbls. and has had to pay $300,000 for development. Not a very attractive proposition.

The Carter Oil Co. and Southwestern Petroleum Co.'s Dively lease, the southwest quarter of Section 24-22-4w, had very unfortunate history. It has yielded the owners 2,893 bbls.

Time, the great informer, will eventually reveal the story of Garber with all its dream and disillusions, hopes and fears, but for the present, the field continues to produce almost 40,000 bbls. a day from the deep sand, an average of 1,000 bbls. per well. There will be considerable money made at Garber.

Total production of the deep sand wells in the Garber Field in Garfield County, Oklahoma, from discovery until November 30, 1925:

	Barrels
Sinclair Oil & Gas Co.—	
No. 25 Belveal	392,743
No. 26 Belveal	14,798
No. 27 Belveal	16,920
No. 28 Belveal	40
No. 29 Belveal	58,815
No. 30 Belveal	9,977
No. 25 Denker	7,495
No. 26 Denker	31,220
No. 19 Hartley	225,803
No. 20 Kisner	189,886
No. 21 Kisner	95,870
No. 22 Kisner	145,500
No. 20 C. K. Walker	40,202
No. 23 C. K. Walker	82,775
No. 27 C. K. Walker	693
Roxana Petroleum Corp.—	
No. 1-W Schroeder	482,076
No. 2-W Schroeder	833,839
No. 3-W Schroeder	180,543
No. 4-W Schroeder	18,384
No. 5-W Schroeder	274,555
No. 6-W Schroeder	66,982
No. 7-W Schroeder	19,156
No. 8-W Schroeder	50,473
No. 1-W Wolfe	65,219
No. 2-W Wolfe	19,538
Marland Oil Co. and Mid-Continent Petroleum Corp.—	
No. 41 School Land	130,968
No. 42 School Land	27,079
No. 43 School Land	40,804
No. 44 School Land	7,290
No. 45 School Land	510,570
No. 47 School Land	25,442
No. 53 School Land	79,315
No. 54 School Land	63,997
No. 55 School Land	932
No. 58 School Land	4,909
The Carter Oil Co.—	
No. 52 Dively	171
No. 54 Dively	2,722
Healdton Oil & Gas Co.—	
No. 29 Belveal	14,141
No. 30 Belveal	2,159
No. 31 Belveal	1,074
Total	4,235,075

Total production of the deep sand at Garber by leases and companies from discovery until November 30, 1925:

Sinclair Oil & Gas Co.—	
Belveal lease	493,293
Denker lease	38,715
Hartley lease	225,803
Kisner lease	431,256
Walker lease	123,670
Total Sinclair	1,312,737
Roxana Petroleum Corp.—	
Schroeder lease	1,926,008
Wolfe lease	84,757
Total Roxana	2,010,765
Marland Oil Co. and Mid-Continent Petroleum Corp.—	
School Land lease	891,306
Carter Oil Co.—	
Dively lease	2,893
Healdton Oil & Gas Co.—	
Belveal lease	17,374

DAVID F. CONNOLLY DROPS DEAD WHILE ADDRESSING AN AUDIENCE

David F. Connolly, veteran oil man, dropped dead Monday evening while addressing an audience of 500 men and women at a banquet in the Crystal Ballroom of the Mayo Hotel in Tulsa. The occasion was the closing of a 10-day campaign to raise funds with which to complete St. John's Hospital in Tulsa. It had been announced that $550,000 had been subscribed, and that the campaign had been a success in every way. The audience was in a happy mood and had already listened to felicitous addresses by D. E. Buchanan, general, in charge of the drive, and the Rev. W. H. Murphy, pastor of the Second Presbyterian Church of Tulsa, after which Mr. Connolly was introduced.

Mr. Connolly appeared to be at his best. He had worked hard for the success of the campaign just closing, and in the first campaign several years ago, when the movement was started. He had briefly sketched the high points in the work of giving Tulsa a great hospital, and was in the midst of a dramatic and touching picture of the charitable functions of the hospital when his voice began to tremble and his hand to shake. With a strong effort of will he pulled himself together and continued his address, but just as he began his peroration he was seen to waver. Murmuring "this is the end" in a voice so low that only those near him heard it, Mr. Connolly slipped to the floor.

The large audience rose to its feet with a gasp of sympathy, but quickly settled back and sat in awed silence while physicians ministered to the prostrate figure on the stage. Few in the large audience but thought that the speaker had fainted, until several minutes later when Doctor Hendershot, one of the physicians who had gone to Mr. Connolly's side, announced his death. The audience broke out into a loud cry of grief and many men and women wept. A benediction was spoken by the Rev. Rolfe P. Crum,

David F. Connolly.

(Continued on Page 124)

Late News From the Fields

OKLAHOMA

In the Davenport Field, the Magnolia Petroleum Co.'s No. 10 A. Sukovaty, NE cor. SW, Section 2-14-5, has a fishing job in sand topped at 3,300 feet and drilled to 3,350 feet. The well is making 250 bbls.

The Gypsy Oil Co.'s No. 2 Caves, NW cor. SW SE, Section 35-15-5, had sand at 3,312-3,371 feet and is drilling at the latter depth while the well is making 12 bbls. an hour.

The daily production of the deep sand in the Garber Field for Tuesday of this week was 36,740 bbls., a decrease of 3,100 bbls. from the preceding 24 hours. The newest deep well in that field, Roxana Petroleum Corp.'s No. 9-W Schroeder, which made 2,911 bbls. the first day, has dropped to 1,220 bbls. and is making a huge amount of water estimated at 9,500 bbls.

GULF COAST

HOUSTON, Tex., Dec. 8.—Two small producers have been added to the list in the Goose Creek Pool. The Humble Oil & Refining Co.'s No. 20 Smith, a worked-over hole, is pumping 60 bbls. at 2,435 feet and No. 65 Smith is good for 50 bbls. at 2,545 feet.

In the new district on the north side of the Humble Pool on the south bank of the San Jacinto River, Long and others' No. 1 Bryan is bailing around 2,650 feet. The same interests recently finished three nice wells there and Sutherland and associates completed one. They came in with original output from 200 to 600 bbls. The Kirby Petroleum Co. and Hamill's No. 1 Lipper is drilling, as is Harvey & Rush's No. 1 and Kavanaugh and others' No. 1.

The Yount-Lee Oil Co.'s No. 1 McFadden, a deep test on the southeast side of Spindletop Hill, quit flowing and is being rigged to pump. A derrick is up for No. 2, located 300 feet southeast from No. 1. Flynn and associates are starting a deep test on the southwest side of the hill.

The Humble Oil & Refining Co.'s No. 2 King, 9 miles southeast of Kingsville, Kleberg County, is reported good for 300 bbls. It offsets the same company's No. 2 Cross-State land, completed three months ago as a 100-bbl. pumper. The depth is around 2,900 feet. The section was considered gas territory until the Humble Co. completed the oil well. That company has a big block of acreage. The King ranch itself embraces 1,000,000 acres on which are located several towns and immense herds of cattle. San Gertrude, the marble homestead of the King family, is one of the show places of Texas. J. B. Smithman of Oil City, Pa., and Munhall of Old Allegheny, Pa., drilled a couple of tests on the King ranch about 20 years ago.

The United States Gas & Oil Co. bailed No. 1 Peters in Duval County at 2,150 feet, got nothing and is drilling the hole deeper. The Associated Oil Co. is coring formations in No. 1 Sutherland in that county at 2,740 feet.

Down in Starr County on the Rio Grande, Hadley and Harmon abandoned No. 2 Kelsey, north of Rio Grande City, and has a derrick for No. 3 Kelsey. Dauchey & Bryant's No. 1 in survey No. 125, northwest of Rio Grande City, is drilling around 1,200 feet. O. W. Killiam is about ready to spud in No. 1 on the Guerra ranch.

In the Luling Field, the United North and South Oil Co. is drilling Nos. 13 Moore and 19 McKean, the latter in the Guadalupe County side of the field.

The Detex Oil Co.'s No. 1 Inscore, southeast of production, is drilling around 1,800 feet and No. 1 Bridges is rigging.

The Houston-Gulf Gas Co. has started drilling No. 1 Gray in the Markham Pool.

NORTH CENTRAL TEXAS

FORT WORTH, Tex., Dec. 7.—The Republic Production Co. is plugging back its No. 1 Baker wildcat in southwestern Upton County and will test the pay formation at about 2,170 to 2,223 feet. This well was reported a short time ago to have encountered fresh water below the lime, or sandy lime formation that is oil bearing. Most operators believe it is the customary sulphur water so often found in that section.

Wilbarger County has developed a production just short of 16,000 bbls. daily, and it may be increased next week in view of the number of new producers, including several by the Humble Oil & Refining Co. and the Landreth Production Co. The Humble's No. 36 Stephens is making 450 bbls. at 2,340 to 2,400 feet; No. 37 Stephens, 650 bbls. at 2,364 to 2,404 feet; No. 2-G Waggoner is making 300 bbls. in the sand at 1,870 to 1,883 feet; No. 2-H Waggoner is estimated good for 400 bbls. at 1,860 to 1,875 feet; No. 3-H Waggoner is flowing by heads and making 250 bbls. at 1,858 to 1,867 feet, and No. 1-I Waggoner is doing 390 bbls. at 1,886 to 1,894 feet.

The Landreth Production Co. has six new completions: No. 2-A Waggoner, 325 bbls. at 1,844 to 1,857 feet; No. 5-D Waggoner, 375 bbls. at 1,892 to 1,912 feet; No. 6-D Waggoner, 370 bbls. at 1,889 to 1,900 feet; No. 8-D Waggoner, 450 bbls. at 1,867 to 1,883 feet; No. 3-F Waggoner, 310 bbls. at 1,913 to 1,927 feet and No. 1-G Waggoner, 350 bbls. at 1,853 to 1,869 feet.

In Stephens County, the Texas Pacific Coal & Oil Co.'s No. 3 Hand, Account 2, not yet completed, is producing from the top of the sand at 3,708 feet and made 250 bbls. the first 24 hours.

The Independent Oil & Gas Co.'s No. 1 Wolf in the Texhoma Oldham Pool in Archer County, is flowing at the rate of 70 bbls. It is being standardized.

The Humphreys Oil Co.'s No. 1 University in Crockett County has a slight showing of oil in a sandy lime formation at 1,419 feet.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., Dec. 7.—The Humble Oil & Refining Co.'s No. 2 King, 9 miles southeast of Kingsville, in Kleberg County, on the Gulf Coast, is in, and unconfirmed reports say it is making 300 bbls. It offsets No. 2 Cross State land by the same company, completed last June, and making 100 bbls. on the pump. The depth is a little below 1,900 feet. The Humble Co. owns all the leases in sight.

MEXICO HAS 35,000-BBL. WELL

TAMPICO, Mex., Dec. 5.—Mexican Eagle Oil Co., Ltd., has just finished its No. 30-A Cerro Veijo, in the South Fields, for 35,000 bbls. The drill tapped the big pay at a subsea depth of 1,980 feet. Fast time was made on this well, for the South Fields, the actual drilling time being 17 days.

TENNESSEE HAS 1,500-BBL. WELL

BOWLING GREEN, Ky., Dec. 7.—Dafoe and associates' No. 7 Hamp Lynn at Tinsley Bottom, Clay County, Tennessee, after making 250 bbls. the first day blew in and flowed 1,500 bbls. and is going on at that rate today. It was drilled to 459 feet, 152 feet below the Pencil Cave. Three pays were found from 332 feet to the bottom. At Celina, 5 miles north, the Gray well of H. C. Clark broke loose and was reported by its owners at 100 bbls. an hour.

PLACED ON HONOR ROLL

OIL CITY, Pa., Dec. 5.—S. M. Freeman, or "Si" as he is usually known, aged 69 years, has been placed on the honor roll of the National Transit Pump & Machine Co. after 19 years of service with the company as stationary engineer. He was placed on the honor roll at the minimum age owing to the condition of his health and a physician's recommendation to seek rest.

JOHN D. ROCKEFELLER PLEDGES $250,000 FOR PETROLEUM RESEARCH

John D. Rockefeller has pledged a fund of $250,000 to the American Petroleum Institute "for the initiation of a program of scientific research in petroleum," according to an announcement made by the American Petroleum Institute. The fund is to be available in annual installments of $50,000 for five years, and to be expended "primarily in supporting research fellowships in scientific institutions—the recipients of such fellowships to engage in research on some problem of the physics, chemistry or geology of petroleum oil"; and the results of the work are to be made "freely available to the industry and public generally."

The purpose is not merely to secure the carrying on of a limited amount of scientific research by specially engaged workers, but rather to utilize this means to enlist a more general scientific interest in petroleum. It is therefore left to the discretion of the Committee administering the fund to employ it not only for the direct support of research but in any other manner which will accomplish Mr. Rockefeller's major purpose.

The work will probably embrace the more abstruse phases of investigation, as against the practical phases of research now being highly developed by the petroleum companies, but important practical results will be secured for the benefit of the entire industry.

Mr. Rockefeller recommends that the fund be administered by a committee consisting of Messrs. J. C. Donnell, Walter C. Teagle and Robert L. Welch, all directors of the American Petroleum Institute. Mr. Donnell is president of the Ohio Oil Co.; Mr. Teagle is president of the Standard Oil Co. of New Jersey, and Mr. Welch is general secretary and counsel of the Institute.

The Board of Directors of the Institute, in announcing the gift, expressed their appreciation of Mr. Rockefeller's continuing interest in the practical problems of the industry. It was stated that the plan for administering the fund would be worked out by the committee named, in consultation with the board of directors, with Government officials concerned with the industry, and with educators, scientists and technicians.

It is expected the committee will meet in a short time, possibly at the annual meeting of the American Petroleum Institute at Los Angeles in January, to start in operation Mr. Rockefeller's plan. Just what steps will be taken or what agencies will be used in developing research work is conjectural, but it is believed that among other agencies, the cooperation of the National Research Council at Washington will be secured.

Mr. Rockefeller's letter follows:

"American Petroleum Institute,
Robert L. Welch, General Secretary,
250 Park Avenue, New York.

"Gentlemen:

"Having spent my lifetime in the solution of many of the problems that have constantly faced the oil industry, I am deeply and sympathetically interested in those which are still to be met. It will therefore give me great pleasure to provide, if the proposal has your approval, for the initiation of a program of scientific research in petroleum.

"I feel that the future welfare of the industry is to an important degree dependent upon an increased scientific interest in petroleum and its problems and possibilities. Within recent years the commercial units of the industry have, through their own technical staffs, shown their ability to apply and utilize with benefit all the scientific information at their command, and largely by these means they have succeeded in meeting an increase in demand without precedent in an industry of such character and proportions. The future must speak for itself, but in the light of the past it may be expected that it will become more than ever necessary that the maximum amount of scientific knowledge bearing upon petroleum be made available to those actually engaged in the industry.

"Only a part of the requisite knowledge can come from the efforts of research workers specially employed for that purpose. The remainder must be the result of a widespread interest in the scientific problems of petroleum—such an interest as will lead an increasing number of able men in all centers of scientific training and research work to give the study of petroleum the time which its importance justifies.

"My purpose is not merely to secure the carrying on of a limited amount of scientific research by specially engaged workers, but rather to utilize a program of this character in such a manner as to attain the larger ends which are involved. For this purpose, therefore, I will be glad to contribute to the American Petroleum Institute up to an aggregate of $50,000 (provided so much is needed) in each of five years beginning with January 1, 1926, payments to be made from time to time, as required, in accordance with the judgment and upon the recommendation of a committee to consist of Mr. J. C. Donnell, Mr. W. C. Teagle and Mr. Robert L. Welch; it being understood that should any vacancy or vacancies occur in this committee I will appoint another or other members of the Institute to fill the same, and in case I am not here to do so, my son will make such appointment or appointments, and in case neither of us is here, then such vacancy or vacancies will be filled by my son's executors. These sums are to be expended under the direction of the committee primarily in supporting research fellowships in scientific institutions; the recipients of such fellowship to engage in research upon some problem of the physics, chemistry or geology of petroleum oil. I should like to leave it to the discretion of the committee to employ some portion of these sums in any other manner which may be effective in achieving the purpose of the program. The results of the work are to be made freely available to the industry and the public generally.

"Sincerely yours,
"JOHN D. ROCKEFELLER."

60,000,000-FOOT GAS WELL ON RANGELY DOME

DENVER, Colo., Dec. 5.—The Texas Co. encountered a gas flow of 60,000,000 feet of gas a day in a wildcat on Rangely Dome, western Colorado, in the Frontier (Wall Creek) sand, at 3,001 feet. Pressure blew out the tools, wrecking the control valve and allowing the well to run wild. Efforts are being made to mud the well in and drill to the Dakota 450 to 600 feet deeper.

The well is 3,000 feet west of a wildcat drilled by Midwest Refining Co. last spring which encountered 50,000,000 feet of gas in the Frontier sand but was so badly damaged by the blowout that efforts to clear the hole and drill to the Dakota have not yet been successful. Rangely Field has commercial production in shallow shale wells and the operators are hopeful of opening a new oil pool in the objective horizon.

DEATH OF EMIL DEEN

Emil Deen, one of the organizers of the Oklahoma Producing & Refining Corp. of America, died suddenly in Paris, France, Saturday. Mr. Deen, a native of Holland, came to Tulsa in 1908. He was already familiar with the oil business in foreign fields and was not long in Oklahoma before he made his presence felt. With the aid of foreign capital and by merging a number of Oklahoma companies he and his associates organized one of the largest producing and refining companies in the State, which later was absorbed by the Pure Oil Co. Mr. Deen returned to Europe and continued his oil activities in the British East Indies, and was active up to the time of his death.

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REED ROLLER BIT COMPANY

New York Houston Los Angeles

North Louisiana-Arkansas

By M. L. Vaughn

Another gain in production in Arkansas due to increase in output of Smackover heavy resulting from improved weather conditions. Development around Urania in northern Louisiana results in 170 bbls. new production, with 13 companies drilling in that area. Wildcatters showing considerable activity.

SHREVEPORT, La., Dec. 7. — In North Louisiana, Caddo heavy and Elm Grove show an increase over the preceding week, and Urania is now listed with 170 bbls. new production. Arkansas showed a gain only in Smackover heavy, which is due to both improved weather conditions and new production. The increase in oil production for the week is due mainly to the fact that the high waters have receded, weather conditions are better, and to quite a bit of new production. The daily average production in North Louisiana for the week just ending is 45,300 bbls., and for Arkansas 207,587 bbls., making a total for both States of 253,175 bbls., and showing an increase over last week of 2,937 bbls. The distribution is as follows:

North Louisiana	
Bellevue	2,370
Caddo, light	8,590
Caddo, heavy	2,650
Cotton Valley	8,900
DeSoto and Red River	3,885
Elm Grove	735
Haynesville	11,905
Homer	6,095
Urania	170
	45,300
Arkansas	
Smackover, heavy	175,455
Smackover, light	21,340
El Dorado	8,020
Nevada	1,370
Stephens	1,690
	207,875
Total both fields	253,175
Increase over last week	2,937

Urania Development

The Urania extension and the deep tests continue to hold the interest of oil men in North Louisiana.

Business conditions in Winnfield are reported to be steadily improving due to the oil development of the Urania Field in Winn and LaSalle Parishes. Eight new locations were made last week and the following 13 companies are drilling: The Urania Petroleum Co., which opened the new pool; the Ohio Oil Co., Louisiana Oil Refining Corp., Rowe-Wallace Syndicate, Cleve Love and others, Love Brothers & Gould, Ayers Brothers, Alexandria Petroleum Co., Dixie Oil Co., Zeigen and others, Natural Gas & Fuel Corp., Keene & Woolf and Dowling & McCurdy. Present production is being handled by the Missouri Pacific Railway, but it has been announced that the Tremont & Gulf will construct loading racks and furnish all necessary facilities for handling a part of this business at Tanzy, which is 4 miles west of the nearest production in the Urania Field.

Five tests are due in Urania as follows: In 19-10-2e Keene & Woolf set 6-inch casing the latter part of last week, and the Urania Petroleum Co. is preparing to set casing in its No. 1 and in No. 10. In 30-10-2e, the Louisiana Oil Co. has casing set in No. 1 Tremont. In 36-10-1e, Cleve Love has casing set in No. 1 Doughty and has cored into rich oil sand, which looks very promising. In the same section, Dowling & McCurdy are drilling in and testing out shallow sand at 950 feet in their No. 1 Holloway. Ayers Brothers' No. 1 continues to flow about from 50 to 75 bbls. of oil per day. The predictions are that the field will probably be small, but be a steady producer.

It is reported that the Natural Gas & Fuel Co. has leased 30 acres in the east side of the southeast quarter of southwest quarter of Section 24-10-1e, from the Urania Petroleum Co., and that drilling will be begun at once.

In DeSoto Parish the Gulf Refining Co. is down 5,500 feet in its No. C-18 Williams, in Section 31-13-11. This breaks all deep tests records in Louisiana. The hole is now over 1,000 feet in lime.

Cotton Valley Area

In Cotton Valley, Webster Parish, the Palmer Corp. brought in No. 1 Davis, Section 23-21-10, good for 6,000,000 feet of gas with spray of oil. The hole will be drilled deeper. The Humble Oil & Refining Co.'s No. 1 Cox, in Section 22-21-10, is down 2,950 feet. The Ohio Oil Co.'s No. 1 Hodges, an offset to the Palmer well, is down around 2,900 feet.

A core taken from L. A. Lands and others' No. 1 Calhoun, in the northeast of the southwest of Section 15-18-7, Bienville Parish, 2 miles west of Gibsland, was identified by local geologists as Marlbrook marl. It was found at a depth of 565 feet, which indicates a salt dome. In North Louisiana it has been found at a depth of 1,100 to 1,200 feet and in Cotton Valley at 2,000 feet.

The Triangle Drilling Co. is putting down two tests in strictly wildcat territory. One of these is in Caddo Parish on the Texas-Louisiana line in the southwest corner of fractional east half of Section 17-23-16, 2½ miles northwest of Rodessa, and about 3 miles south of Arkansas State line. The other wildcat is in Claiborne Parish, 5 miles east of Athens on the Baker farm in Section 13-19-6.

Texas Producer

According to reports reaching Shreveport from Marion County, Texas, Odell & Lawton brought in their No. 2 Harrell on the Noll survey, as a 225-bbl. producer from 2,340 feet. This well is a quarter of a mile west of production on the Louisiana side of the State line.

In Arkansas another test of the Lafayette County wildcat, the Arkansas Fuel Oil Co.'s No. 1 Allen, in Section 18-19-24, is awaited with much interest. After pumping eight hours, it showed 15 to 20 bbls. of oil and 150 bbls. of salt water at a depth of 2,785 feet. It was shut down in order to brace the rig, and another test is due within the next few days. In the same county, the Kensaw Petroleum Co. is trying to pull 250 feet of 4½-inch casing set 2,715 feet in its No. 2 Red River Lumber Co. in Section 3-20-24, 5 miles southeast of No. 1 Allen, in order to deepen to the level where Arkansas Fuel Petroleum Co. tapped a sand in its No. 1 Allen. This is the third well drilled by the Ken-Saw Petroleum Co. in Lafayette County. No. 1 Fee, in Section 31-19-24, tested dry around 2,330 feet. No. 1 Red River Lumber Co. was a salt water hole around 2,830 feet.

Although Wingfield and others, owners of No. 1 Tuft, have made four tests in 18-17-14 in the El Dorado East Field, from the showing recently they are still hopeful of bringing in a producer. If the salt water can be shut off, they feel the well will make a producer. The well has just been closed and cement put in the hole. If the cement fails to hold the water another string of casing will be set.

Union County—Completions

Completions in Union County for the week numbered 9, with 6 producers and 3 dry holes.

Bostick Drilling Co. completed No. 1 Hodges, Section 12-16-17, pumping 25 bbls. at 2,333 feet.

Crawford & Sebastian junked and abandoned No. 6 James, Section 6-16-15, at 2,405 feet.

Doern and others tested dry and abandoned No. 1 Fletcher, Section 4-19-16, at 2,941 feet.

Eason and others completed No. 6 Murphy, Section 15-16-15, blowing 150 bbls. at 2,654 feet.

Olds and others are pumping 10 bbls. at 2,140 feet in No. 4 Parnell, Section 9-16-16.

Parrish and others completed No. 4 Ferguson, Section 6-16-15, flowing 150 bbls. at 2,558 feet.

Standard Oil Co.'s No. 5 G. H. Goodwin, Section 36-17-16, is pumping 5 bbls. at 2,217 feet.

The Texas Co.'s No. 4 Hays, Section 4-16-15, is pumping 350 bbls. at 2,354 feet.

Weiss & Goodka abandoned No. 1 Thurlkill, Section 29-18-15, at 3,009 feet.

Ouachita County

Operations in Ouachita County for the past week resulted in completion of 6 wells, only 3 of these being producers.

Magnolia Petroleum Co.'s No. 5 J. Goodwin, Section 5-16-15, is flowing 200 bbls. at 2,560 feet.

Phillips Petroleum Co. completed No. 7 Johnson, Section 34-15-15, pumping 235 bbls. at 2,371 feet, and junked and abandoned No. 18 Joyce, Section 33-15-15, at 2,425 feet.

Reynolds and others completed No. 1 fee, Section 25-15-17, pumping 20 bbls. at 2,313 feet.

Sure Oil Corp. abandoned No. 2 Snyder, Section 34-15-15, at 2,355 feet.

Sutton and other abandoned No. 9 Hughes, Section 28-15-16, at 2,554 feet with casing in hole.

Wildcat Territory

Bossier Parish—Atlantic Oil Producing Co. completed No. 1 Bolinger, Section 38-23-11, making 40,000,000 feet of dry gas at 2,647 feet, 3 miles north of Sarepta and 6 miles north of the line.

Caddo Parish—W. D. Chew completed No. 1 Murphy, Section 33-21-16, pumping 15 bbls. at 1,850 feet, and Standard Oil Co. completed No. 174 Stiles, Section 27-21-16, pumping 10 bbls. at 2,376 feet, both wells being in the old Caddo Field.

In the Pine Island district, Fortuna Oil Co. completed No. 21 Raines, Section 22-21-15, pumping 105 bbls. at 1,582 feet; Lewis Oil Corp.'s No. 13 Raines, same section, is pumping 7 bbls. at 1,604 feet, and O'Dell & Lawton completed No. 1 Union Oil & Gas Co., Section 15-21-15, pumping 6 bbls. at 1,700 feet.

LaSalle Parish—Beckman and others completed No. 2 Urania, Section 25-10-1e, flowing 5 bbls. at 1,534 feet, 3 miles south of Urania and 1 mile east of Tullos.

Craig and others moved rig and abandoned No. 1 King, Section 36-10-1e, at 800 feet, 2 miles south of Tullos and 3 miles east of Rochelle.

Dixie Oil Co. abandoned No. 2 L. & A. Oil Co., Section 4-8-2e, at 2,082 feet, 8 miles west of Jena.

Union County—Drilling

Amerada Petroleum Corp. is drilling out cement at 2,349 feet in No. 5 Calloway, Section 4-16-15; waiting for standard rig to pump in 1,500 feet of oil and 25 feet of broken sand at 2,570 feet in No. 11 Flenniken, Section 6-16-15.

Belmont and others have shut down and are waiting orders at 1,901 feet in No. 1 Jones, Section 21-16-15; Broderick & Calvert have set 10-inch at 360 feet in No. 4 Bradford, Section 8-16-15, drilling at 385 feet.

Carnahan and others are drilling at 2,297 feet in No. 1 Coombs, Section 24-18-16; Clements Oil Co. pulled 3-inch casing, now pulling 5-inch at 2,880 feet in No. 4 Moodey, Section 18-17-14; Crawford & Sebastian are rigging up to drill No. 10 James, Section 8-16-15; Rowe Daniels, rigging up to drill No. A-1 Tatum, Section 7-16-15; coring at 2,399 feet in No. 7 Tatum, same section; set 10-inch at 204 feet, drilling at 1,800

East Central Texas

By Special Correspondent

CORSICANA, Tex., Dec. 5.—A 250-bbl. well completed by J. K. Hughes and others, No. 17 Ellis on the Varela survey, in the Groesbeck district, Limestone County, was the only good well completed in the East Central Texas area in the week in review. A number of dry holes and abandoned locations were reported during the week.

New occasion for interest has arisen with the preparations of the Gulf Production Co. to drill a deep test in the southeastern corner of Hunt County.

The operation, now rigging up, is No. 1 J. D. Bell and others, and the site is 150 feet from the south and west lines of the J. D. Bell and others' 490-acre tract in the J. Bordine survey, about 8½ miles southwest of Lone Oak.

The Gulf Production Co. has a large block of acreage in the southeastern end of Hunt County, acquired about a year and a half or more ago, during the days when something of a boom in oil leasing prevailed throughout that section. The operators are expected to carry the test down to the Woodbine sand.

Cranfill Brothers Drilling Co. and others' No. 1 R. B. Monk, in Kaufman County, 3 or 4 miles south of Elmo, is reported a salt water well and abandoned at 3,337 feet. This test, on the R. B. Monk tract, in the John Ables survey, was spudded in November 13 and was completed as a salt water well November 31. It was drilled with rotary tools.

In Limestone County the Magnolia Petroleum Co. has a 750,000-foot gasser in No. 2 Stroud, Varela survey, Groesbeck district, from sand at 2,937 to 2,942 feet. This well got the Austin chalk at 2,265-2,670 feet. The Pure Oil Co.'s No. 15 Smith, McNulty survey, Wortham district, had salt water at 1,393-1,405 feet and will be plugged back to 1,376 feet. Eisenmaker and others' No. 1 Two Rivers, Abbott survey, was drilling at 1,500 feet.

In Navarro County the Carrita Oil & Gas Co., in its No. 1 J. Slime, Donaldson survey, was drilling below 2,560 feet. It drilled through chalk at 1,936 to 2,276 feet. Elliott & Nicolle have abandoned the location for No. 1 Barry, Horn survey. The same firm abandoned No. 1 Westbrook, Horn survey, which was dry at 3,711 feet. McNeely & LaSuer have abandoned the location for No. 1 Harvard, Meador survey. In the Richland district the Sun Oil Co.'s No. 3-A Hillburn, Hudson survey, was dry at 3,000 feet. The Gulf Production Co.'s No. 3 Bounds, Hillhouse survey, Currie district, was abandoned at 3,202 feet after it had tested salt water.

feet in No. 8 Tatum, another test in the same section.

Federal Petroleum Co. drilled out cement, now waiting orders at 2,580 feet in No. 5 Flenniken, Section 6-16-15: Ferguson Drilling Co. is setting 6-inch at 2,623 feet in No. 1 Howard, Section 7-16-16.

Grimes & Jones set 6-inch at 2,190 feet in No. 1 J. A. Rowland, Section 5-18-14.

Gulf Refining Co. perforated 4-inch on bottom at 2,736 feet in No. 1 Howard, Section 13-16-13; set 10-inch at 278 feet, drilling at 1,290 feet in No. 5 Primm, Section 1-16-16; waiting on standard rig to pump in 700 feet of oil and 19 feet of broken sand at 2,260 feet in No. 43 Werner, Section 6-16-16, and has derrick up for No. 44 Werner, same section.

F. C. Henderson drilled out cement at 2,455 feet in No. 2 Smith, Section 18-16-15.

Hickman and others lost hole and moved rig over 50 feet west for No. 12 Graves, Section 3-16-15; Howell & Knowles have derrick up for No. 1 Springer, Section 36-17-18; Hollifield and others moved rig 50 feet north, set 10-inch at 290 feet, drilling at 700 feet in No. 1-A Giller, Section 19-16-15.

Humble Oil & Refining Co. has derrick up for No. 5 Giller, Section 15-16-15.

E. M. Jones set short string of 4-inch at 2,642 feet in No. 3 Cook, Section 16-16-15; drilling at 2,467 feet in No. 2 Murphy, Section 17-16-15; arranging to deepen No. 1 Murphy, which was formerly completed pumping 1,200 bbls. at 2,114 feet, same section; pulling 100 feet of 6-inch, set 10-inch at 98 feet, drilling at 2,360 feet in No. 3 Murphy, another test, same section; tested salt water arranging to set 5-inch in 7 feet of sand at 2,617 feet in No. 2 Lawton, Section 19-16-15.

Kampeter and others set 12-inch at 203 feet in No. 1 Towns, Section 24-19-11; Keene & Wolf are drilling plug at 2,678 feet in No. 2 Hinshaw, Section 17-16-15; Kennebrew and others are drilling at 2,535 feet in No. 1 Williams, Section 3-16-15.

Laurel Oil & Gas Co. is rigging up to drill No. 5 Tatum, Section 7-16-15; Liberty Oil Co. is drilling at 1,760 feet in No. 2 Davis, Section 31-16-15.

Lion Oil & Refining Co. set 10-inch at 265 feet, drilling at 682 feet in No. C-4 Bilyew, Section 8-16-15; 8-inch stuck and cemented, total depth at 2,460 feet in No. 9 Graves, Section 3-16-15; set 6-inch at 2,458 feet in No. A-7 Murphy, Section 7-16-15; drilling at 2,095 feet in No. A-12 Murphy, same section; set 10-inch at 311 feet, drilling at 1,490 feet in No. G-11 Murphy, Section 8-16-15; set 6-inch at 2,480 feet in No. C-5 Murphy, same section.

Little Fay Oil Co. is drilling at 2,590 feet in No. 4 Harrell, Section 17-16-15.

Magnolia Petroleum Co. tested show of oil at 2,377 feet, drilling shale at 2,480 feet in No. 8 Hatfield, Section 7-16-15; tested salt water and show oil, drilling 2,410 feet in No. 9 Hatfield, same section; tested dry at 2,596 feet, pulling liner to deepen No. 2 Hisseler, Section 8-16-16; set 10-inch at 206 feet, drilling at 1,100 feet in No. 3 N. J. Scott, Section 12-16-17.

Marine Oil Co. set 10-inch at 276 feet, drilling at 1,795 feet in No. B-5 Murphy, Section 15-16-15; Pat Marr is drilling at 2,205 feet in No. 1 Moody, Section 16-17-15.

Murdock and others cemented back to 2,100 feet, drilled out cement in No. 7 Hays, Section 4-16-15; Murphy Oil & Gas Co. is drilling at 2,410 feet in No. 7 T. C. Murphy, Section 9-16-15.

Other Union Operations

Natural Gas & Petroleum Co. is drilling at 2,585 feet in No. B-5 Harold, Section 17-16-15; drilling plug at 2,702 feet in No. C-3 Lawton, Section 10-16-15; has derrick up for No. 5 Ballard, Section 15-16-15.

Ohio Oil Co. is drilling at 2,612 feet in No. 12 Pate, Section 10-16-15.

G. H. Pace is coring at 2,335 feet in No. 1 Barnett, Section 11-16-18. Phillips Petroleum Co. is drilling at 2,641 feet in No. 2 Thompson, Section 7-16-15; arranging to deepen No. 5 Alphin, Section 11-16-15, which was formerly completed at 2,405 feet.

Pure Oil Co. set 6-inch at 2,555 feet in No. 7 Meriwether, Section 6-16-15. Raines and others are washing to bottom, will set 6-inch at 2,060 feet in No. 1 Dumas, Section 9-17-16; Reynolds and others are rigging up to drill No. 1 Dumas, Section 15-17-16.

Roxana Petroleum Corp. is blowing to test in 6 feet of sand at 2,363 feet No. C-5 Flenniken, Section 8-16-15; Russell and others are drilling at 2,675 feet in No. 1 Brown, Section 8-17-14. Simms Oil Co. is drilling plug at 2,447 feet in No. A-1 Murphy, Section 16-16-15.

Southern Crude Oil Producing Co. is drilling at 2,340 feet in No. 9 Graves, Section 3-16-15; set 8-inch at 2,359 feet in No. 7 Lyell, Section 3-16-15; shut down waiting on water at 1,306 feet in No. 3 Lawton, Section 7-16-15; has derrick up for No. 4 Lawton, same section.

Snowden & McSweeney are drilling at 2,608 feet in No. 1 McGraw, Section 1-16-17. Standard Oil Co. set 6-inch at 2,522 feet in No. 23 J. H. Alphin, Section 8-16-15. Sure Oil Co. is drilling at 2,221 feet in No. 4 Murphy, Section 15-16-15; Stone Oil Co. set 3-inch at 2,766 feet, drilling at 2,774 feet in No. 1 Davis, Section 28-16-14; Sun Oil Co. has drill stem stuck at 2,431 feet in No. 6 Hatfield, Section 6-16-15; drilling at 2,410 feet in No. 1 McClanahan, Section 1-16-16.

Texas Oil Co. set 10-inch at 482 feet, drilling at 1,617 feet in No. 9 Alphin, Section 3-16-15; set 4-inch at 2,540 feet, tested salt water at 2,530 feet in No. 10 Alphin, same section; has 6-inch stuck at 3,527 feet in No. 11 Graves, same section; drilling at 2,523 feet in No. 12 Graves, Section 3-16-15; drilling at 50 feet in No. 1 McClanahan, Section 12-16-16.

Thurman and others set 6-inch at 2,547 feet in No. 7 Wilson, Section 6-16-15; set 12-inch at 266 feet in No. 8 Wilson, same section, and has rig up for No. 9 Wilson, another test, same section; milling casing at 1,880 feet in No. 1 Tatum, Section 7-16-15, formerly completed making 20,000,000 feet of gas at 2,009 feet, as Rowe Daniels and others.

Unity Petroleum Co. tested salt water, show of oil, arranging to recement casing at 2,587 feet in No. 8 Bilyew, Section 8-16-15.

Wingfield and others are coring at 2,823 feet in No. 3 Lyons, Section 7-7-14; recementing bottom hole at 2,853 feet in No. 1 Tufts, Section 18-17-14.

Ward and others have shut down and are waiting orders at 2,660 feet in No. 1 Goodwin, Section 16-16-15, and Vance and others have temporarily abandoned No. 1 Kane, Section 12-16-16, at 2,632 feet.

Ouachita County

Arkansas Drilling Co. shot casing, blowed to test at 2,030 feet in No. 1 Turnage, Section 34-15-16.

Gulf Refining Co. is recementing 3-inch and drilling plug at 2,695 feet in No. A-18 Umsted, Section 33-15-15.

Howell and others are sidetracking slip at 2,030 feet in No. 5 Williams, Section 3-16-15.

Humble Oil & Refining Co. has derrick up for No. B-8 Arnold, Section 26-15-15; set 6-inch at 1,996 feet, blowing to test in 19 feet of sand at 2,015 feet No. B-7 Arnold, Section 26-15-16; cored sand, drilling at 2,294 feet No. 1 B. Goodwin, Section 22-15-17; loosing returns, cemented bottom hole, drilled out cement at 2,005 feet No. 3 Hildebrandt, Section 28-15-15; set 10-inch at 569 feet, milling on slip at 1,030 feet, No. 4 H. Laney, Section 31-15-15; rigging up to drill No. 6 Umsted, Section 4-16-15.

Kouri and others tested salt water, recemented casing at 2,427 feet, drilling at 2,480 feet, No. 2 Snowhill Church, Section 28-15-15.

Magnolia Petroleum Co. is drilling at 2,040 feet in No. 11 J. Goodwin, Section 5-16-15.

Ohio Oil Co. set 6-inch at 1,995 feet in No. B-7 Lewis, Section 27-15-16; set 6-inch at 1,988 feet in No. B-8 Lewis, same section; also has derrick up for No. B-9 Lewis, same section.

Phillips Petroleum Co. tested salt water at 2,611 feet, plugged back to 2,589 feet, drilling cement at 2,591 feet in No. 14 Joyce, Section 33-15-15.

Pure Oil Co. is drilling at 2,040 feet No. 11 Brister, Section 28-15-15; set 12-inch at 135 feet No. 1 Stout Lumber Co., Section 27-15-18.

Sam Richardson set 10-inch at 363 feet, drilling at 1,050 feet in No. 3 Rhodes, Section 32-15-15; Reynolds and others set 6-inch at 2,262 feet in No. 2 fee, Section 25-15-17.

Simms Oil Co. stuck 4-inch at 2,525 feet, cemented 4-inch, O. D. liner, 2,625 feet No. 5 Hildebrandt, Section 28-15-15; plugged back to 2,698 feet No. 10 F. A. Laney, Section 31-15-15, now arranging to set casing; trying to pull 4-inch at 2,581 feet No. 11 Laney, same section; set 6-inch at 2,597 feet, No. 7 N. B. Murphy, Section 29-15-15.

Standard Oil Co. cemented back to 2,200 feet to test 2 feet sand, total depth 3,167 feet, No. 1 J. Griffin, Section 33-15-15; trying to kill water flow, will cement back to 2,402 feet, No. 1 Umsted, Section 32-15-15, formerly completed pumping 700 bbls.; cemented back to 2,350 feet to test 2 feet sand, total depth 3,499 feet, No. B-5 Umsted, Section 32-15-15.

Superior Oil Co. is rigging up to drill No. 3 Flannigan, Section 6-16-15.

Texas Oil Co. is bailing to test in 1 foot of sand at 2,426 feet, with 1,400 feet of fluid in the hole, No. 16 Berry, Section 33-15-15; drilling plug at 2,591 feet, No. 1 Wright, Section 3-16-15.

Sid Umsted is recementing bottom hole at 2,572 feet, No. 3 fee, Section 4-16-15. Woodley Petroleum Co. is drilling at 2,352 feet in No. 2 Umstead, Section 4-16-15.

Stephens District

Buffalo Oil Co. is drilling at 1,100 feet in No. 3 Morgan, Section 22-15-19.

Cotton Valley District

Fortuna Oil Co. cored sand, waiting orders at 2,547 feet in No. 2 I. Cox, Section 23-21-10.

Gulf Refining Co. has made locations for No. 1 R. H. Coyle, Section 15-21-10, and No. 1 Marshall, Section 21-21-10.

Humble Oil & Refining Co. is drilling in lime at 3,045 feet in No. 1 R. R. Cox, Section 22-21-10.

R. U. Morten tested dry, pulling liner to deepen at 2,536 feet, No. 1 Jose & Massey, Section 27-21-10.

Ohio Oil Co. is drilling at 500 feet in No. 1 W. Cox, Section 23-21-10; drilling in gumbo at 2,152 feet No. 19 Gray, Section 26-21-10; drilling in lime at 2,960 feet No. 1 A. J. Hodges, Section 23-21-10; has made location for No. 4 Sandlin, Section 27-21-10.

Palmer Corp.'s No. 1 Davis, Section 23-21-10, blew in at 1,439 feet, gauged 7,000,000 feet of gas. Will kill and drill deeper.

Victor Wenzel is drilling in gumbo at 1,000 feet in No. 1 Lunsford, Section 10-19-9, and Woodley Petroleum Co. set 6-inch at 2,509 feet in No. B-3 Gray, Section 27-21-10.

Bossier Parish

Texas Oil Co. is arranging to set liner at 2,680 feet in No. 1 Henry Rose, Section 31-23-11, 6 miles south of the Arkansas line and 8 miles northeast of Plain Dealing.

Caddo Parish

In the Pine Island district, Fortuna Oil Co. is blowing to test at 2,214 feet in No. 1 Spell, Section 29-21-15; Ohio Oil Co. set 10-inch at 2,414 feet in No. 1 J. B. Ardis, Section 1-21-15; drilling at 2,629 feet in No. 18 E. K. Smith, Section 12-21-15, and has derrick up for No. 19 E. K. Smith, same section; The Texas Co. is rigging up to drill No. 9 Mabry, Section 13-21-15, and waiting for standard rig to pump at 1,828 feet in No. 17 Raines, Section 13-21-15.

In the Hosston district, Dixie Oil Co. set and cemented 4-inch at 3,570 feet, drilling at 3,580 feet in No. 1 Jolly,

(Continued on Page 106)

News of Mexican Fields

By George Blardone

TAMPICO, Mex., Dec. 5.—The week in review ends for Mexican fields with a total of 17 completions, of which four are producers. However, as most of the producers came in early in the week they have already been reported, i.e., Huasteca Petroleum Co.'s No. 55 Tierra Blanca, in the south fields, rated 25,000 bbls.; Transcontinental Petroleum Co.'s No. 4 Piedras, in the Panuco Field, rated at the time, with a question mark, at 20,000 bbls., and East Coast Oil Co.'s No. 217 Halcon, a big salt water well. Leaving the above wells aside in the initial count, consider the following pay producers:

Transcontinental Petroleum Co., in its No. 1, Lot 1 Tanchicuin, on the north bank of the Panuco River, is finished at 1,640 feet, rated good for 2,000 bbls. This is a shallow well for this section of the Panuco Field. The only other pay completion during the week is in Corcovado, of almost forgotten memory. Here, in Lot 6, Transcontinental finished its No. 23 at 2,250 feet, good for say, 200 bbls.

Failures Numerous

In the Panuco Field, the following failures were recorded: La Corona Petroleum Co.'s No. 92 Piedras, finished as a fluid well at 2,200 feet. It is being plugged. La Espuela Oil Co.'s No. 3 Don Juan, which may make a little producer at 1,873 feet, but for all practical purposes is of little worth, if any; Mexican Sinclair Petroleum Corp.'s No. 11 Tananturo, and No. 4, Lot 1 Camolote, both finished as dry holes at 1,970 and 2,000 feet, respectively.

In the other northern districts are the following failures: In Cacalilao, International Petroleum Co.'s No. 238, Lot 5, is a dry hole at 2,250 feet; Transcontinental Petroleum Co.'s No. 207, Lot 4, a dry hole at 2,050 feet; its No. 233, same lot, came in for 500 bbls. of fluid, showing some little salt water so it can be dismissed insofar as th/s record is concerned. Transcontinental's No. 35 Paciencia is a dry hole at 2,350 feet. Corona Petroleum Co.'s No. 16, Lot 6 Corcovado, is a salt water well at 2,500 feet. Mexican Petroleum Co.'s No. 12 San Pedro is a duster at 2,504 feet. National Lines, in its Chapacao right-of-way through the Ebano property, drilled a salt water well in its No. 24 at 2,160 feet. Cosmos Oil Co., long dormant with a few discontinued tests, finished No. 111, Lot G Corcovado, at 2,503 feet, a dry hole.

Panuco Field

Drilling operations in the Panuco Field as the week ended are best remarked as follows: La Corona's No. 106 Piedras is in gray shale at 1,110 feet, and its No. 102 Delicias is in the same formation at 965 feet. Credito Petrolero's No. 1 is rigging in the Piedras; its No. 3 there is 770 feet in shale; its No. 4 is in white lime at 2,107 feet, with oil and gas shows; its No. 5 is 400 feet in shale, and it is moving in for No. 6. East Coast Oil Co.'s No. 47 Laguna de la Milpa is in gray shale at 410 feet; its No. 452 Ingenio is in gray lime at 1,710 feet, and it is rigging No. 451 Ingenio. Intermex Oil Co.'s No. 2 Tampuche is in clay at 80 feet; its No. 3, same sector, is in gray shale at something around 500 feet. International Petroleum Co.'s No. 22 Tanchicuin is testing cemented 8-inch at 1,320 feet and it is rigging for No. 23. Mexican Sinclair Petroleum Corp.'s No. 8 Zurita is in a hard shale and green lime at 1,750 feet; its No. 11 Gutierrez is in hard shale and shells at 1,750 feet; its No. 13 Gutierrez is in shale at 305 feet, and the status of its other tests remain unchanged since the last report. Mexican Gulf Co.'s No. 3 Flores is in gray lime at 1,700 feet; its No. 9 Zuniga is in the same formation at 1,409 feet and No. 15 Lopez is rigging. New England Fuel Oil Co.'s No. 19 Piazzi is in gray lime at 1,875 feet.

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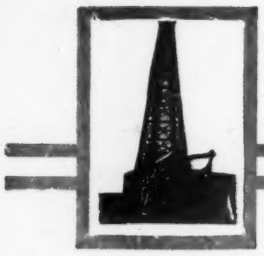
Forecast

In the near future the refiner will not only run his gas oils and fuel oils through the cracking process but will run his crude, whether light or heavy, direct to the process, providing he has the Dubbs Process He will thereby through simultaneous topping and cracking produce all his gasoline in one operation direct from his crude In fact the start has already been made

Universal Oil Products Company
Owners of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois



Southwest Texas Fields

By Special Correspondent

Gonzales, Fayette, Lavaca and Colorado Counties are scene of new line of development inside Balcones Fault zone. Tests being made now are being watched closely. Effort being made to make extension to Mirando Field. Numerous counties in Southwest Texas have important tests drilling.

SAN ANTONIO, Tex., Dec. 7.—A new line of wildcat development is starting up a little farther removed from the Balcones Fault than the important tests previously made but inside the Balcones Fault zone. The new line of wildcat tests runs up through Gonzales, Fayette, Lavaca and Colorado counties. They are from 15 to 20 miles farther from the Balcones Fault proper than those through Guadalupe, Caldwell and Bastrop counties. One of these is the F. E. Rue test on the McVea farm at Waelder in the northern part of Gonzales County. Red Bank Oil Co. will drill in Fayette County. O. W. Killam has spudded in a test at Schulenberg in southeastern Fayette on the Koether farm. McClannahan & Stubbs are down several hundred feet in No. 1 Walters at Muldoon in Fayette County. H. A. Cutler has been given a permit to drill No. 1 J. A. Dromgool in Colorado County on the G. H. & H. Railway Survey No. 1. C. E. Malone is preparing to drill south of Rock Island in Colorado County on a probable salt dome. Machinery is on the ground for No. 1 Harris Green in Fayette County, 3 miles west of Weimer in Colorado County. McClannahan & Stubbs are arranging to drill on the Steinhauser farm, 6 miles north of Flatonia, in Fayette and south of Muldoon. S. H. Spangler of Houston, is to drill No. 1 Regiere, in Fayette County, on the W. S. Newman survey. It seems probable that the line will be considerably extended with additional wildcats to the southwest.

In addition to these J. B. Dunning and Pat Armstrong are rigging up in Guadalupe County, west of Kingsbury and northeast of Seguin, for a test on the Jarvis Dale farm which will be closer to the Balcones. It will probably start drilling this week.

Gonzales County

F. E. Rue is erecting an 85-foot derrick for the first of a series of tests in the northern end of Gonzales County on the McVea land, 25 miles east of the Luling Field in Caldwell County. He has a large block of acreage near Waelder and the first test is to ascertain the geology of the territory and get oil if possible. If the first test seems to indicate that it is advisable a 112-foot derrick and larger rig will be put in for a deeper test. Thor Warner, geologist, who made the location, is to have supervision of the tests. It is the intention to take frequent cores on the first test.

Guadalupe County

Roxana Petroleum Corp. added another water well to the Edwards lime when it bailed its No. 1 Hagerman near Kingsbury in Guadalupe County. Total depth was 2,100 feet and 6 inches by steel tape measure. Casing was set due to a showing of about 5 bbls. of oil on top of the drilling fluid. When drilled in and bailed it made sulphur water. Depth is practically the same as the producing depth in the Luling Field, which is a few miles to the northeast. The well has not been abandoned.

Magnolia Petroleum Co.'s No. 1 Day, in the extreme eastern point of Guadalupe County, is drilling at 3,050 feet and topped the Edwards lime at 2,757 feet.

Hidalgo County

United Production Co. is drilling at 300 feet in No. 1 Oblate Fathers, at La Lomita in Hidalgo County near Mission.

Jackson County

Houston Oil Co. has abandoned the third test it drilled for gas northeast of Edna in Jackson County and has moved the rig to another test, to be drilled in Refugio County. Thus far the Jackson County gas field has not developed as favorably as had been anticipated. The Jackson County Oil Syndicate, which discovered the field with the Drushel well and which is supposed to hold some of the choicest of the acreage, has recently set casing to shut off salt water in the No. 3 Drushel and has No. 1 Read down pretty well. No. 1 Classen, which is the first of its tests east of the Lavaca River, is down below 500 feet.

Jim Hogg County

O. W. Killam got three good flowing wells on the Martinez tract in Survey 256 at the south end of the Henne, Winch & Fariss Pool and is seemingly demonstrating that the pool swings from the straight north and south line it was following to the southwest. Nos. 24 and 26 at 2,081 and 2,062 feet flowed 300 bbls. each when they were brought in and No. 25 at 2,018 feet flowed 250 bbls. His Nos. 27, 28 and 29 are now drilling. Magnolia Petroleum Co.'s No. 9 Martinez has set casing at 2,091 feet using 6⅝-inch. Outside of the proven area, the Magnolia has abandoned its No. 2 Merchant State Bank at 2,027 feet and has moved to a location 300 feet east of No. 1 Merchant State Bank and is spudding in No. 3. All are on the north line of Survey 415 and a half mile south of the Pippin discovery well on Survey 291. O'Byrne and others are spudding in an offset to the north of the Magnolia's No. 1, which is producing a small amount of oil. Simms Petroleum Co. completed its No. 1 Palacious as a gasser a half mile north of the Pippin well and has moved a mile south to the northeast corner of Survey 232 and is starting a new test. Andrews Petroleum Co., drilling a mile northwest of the Pippin well, missed the 1,268-foot producing sand of the Pippin well and is drilling down to around 2,500 feet. It is drilling now at about 1,600 feet. E. J. Braswell's No. 1 Vela on the White subdivision has resumed operations at 1,658 feet and is coring. The tools are in a sand that seems to carry live oil and cores will be taken until it is ascertained whether or not it will pay to set casing and test, the hole now having about 400 feet of open hole.

Karnes County

Earl B. Reynolds' No. 1 Butler, which had a showing nearly a month ago near Runge at 3,061 feet, has been endeavoring to set casing with a packer, but is now to set and cement. A test is expected in a few days.

LaSalle County

DeLange, Eiser & Co. is drilling a water well in southeastern LaSalle County preparatory to starting an oil test on the Dobie ranch. Geologists have completed their work and have tentatively agreed upon the location and surveyors are leaving this week for the field.

Live Oak County

The Texas Co.'s No. 3 Reagan, north of Oakville in Live Oak County, has torn down the rig at 3,600 feet and is moving off.

George B. Pickett is drilling at 1,380 feet on a rock in the No. 1 George West, a few miles south of Three Rivers. He has a 120-foot derrick and is scheduled to make a deep test. Cores are taken at frequent intervals. While shallow production will not be overlooked the test is rigged to go a mile deep if necessary. Pickett has developed some shallow gas production in the upper end of the county near the Crowther Field.

Atascosa County

Eckert, Eiser & Swanson's No. 1 Remley, in southern Atascosa County, is drilling at 500 feet.

Bastrop County

John G. Knox's No. 1 Lane, in northern Bastrop County, is drilling at 1,650 feet. Johnson Brothers are rigged up on No. 1 Trigg, in southwestern Bastrop County. Andrews Petroleum Co. has become interested in the acreage blocked east of Elgin in northern Bastrop by L. J. Dodwell and plan to start drilling about January 1 or soon after. Plateau Oil Co.'s No. 1 Birmingham, in southwestern corner of Bastrop, is drilling at 500 feet.

Bee County

Seagraves & Moody interests have resumed work on No. 1 Welder in Bee County east of Beeville, which they recently took over from W. E. Clark at 2,651 feet. They have assembled casing sufficient to carry the test down to 3,500 feet.

Bexar County

Milham Corp.'s No. 1 Eastwood, a deep test in the Somerset shallow field, is drilling at 5,050 feet. The formation hardened and a core was taken, but the test is still in the lower cretaceous formation. It is understood to be the intention of the company to start a shallow well near the first, but not until the deep test is completed. Witherspoon is drilling on the A. G. Langley and is bailing No. 5 Klemcke in the shallow area of the Somerset Field. Utex Oil Co. expected to get spudded in the first of this week on No. 1 Vick Lamm, in the southern part of Bexar County. It is a deep wildcat test and is expecting some shallow showings.

Caldwell County

George M. Ball's No. 1 Hemphill, which last week at 1,610 feet with 135 feet of Serpentine, looked like a producer that would extend the field more than a quarter of a mile to the east, does not look so good at this time. It got some oil, but failed to respond to the swabbing. It has been allowed to set and the rig removed and another test now rigging, will be drilled to the north of it. It is the history of the field that some tests that look good fail to respond and some that look bad eventually make good wells. It is understood to be the intention to swab and work with the No. 1 later. Witherspoon Oil Co. has completed its No. 6 Brewer on the lease purchased from Grayburg Oil Co., the lease adjoining the Hemphill on the west. It is a 280-bbl. well. No. 11 and No. 12 Palmer lease of Witherspoon are being finished and will make producers. The lease is next north of the Brewer. Lonnie Glasscock's No. 2 L. A. Cardwell is drilling and will be completed in a few days. Detex Oil Co., drilling in the western part of the county south of the Luling Field and in wildcat territory, has a slight showing of oil at

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New Mexico Field Operations

By Special Correspondent

ARTESIA, N. M., Dec. 5.—With 115 producers in the Artesia Field, pipe line runs from November 24 to November 30, inclusive, showed a total of 28,604 bbls., this being handled by the New Mexico Pipe Line Co. and the Illinois Pipe Line Co. This represents an average daily run of 4,086 bbls. with over 500 bbls. daily being used as fuel for drilling purposes. No material increase is looked for in the local production until after the first of the year as practically all offset drilling has been suspended awaiting an adjustment of freight rates and an increase in the price of local crude. The majority of drilling is now being carried on by Flynn, Welch & Yates and the Ohio Oil Co. A large number of new locations have been made by independents but these will not be drilled until crude brings more than $1.35, a barrel according to present plans.

Work of cleaning out is under way on a number of wells which were shot during the week. No. 2 of the Pueblo Oil Co. in Section 4-18-28 it is expected will be good for 75 bbls. following a shot of 200 quarts, run in the 2,300-foot sand. This well stood 1,700 feet in fluid before the shot. No. 3 on the same lease is also drilling in, having topped the pay at 2,387 feet, with the hole below 2,420 feet.

In the same section, the Ohio Oil Co. shot its No. 5 on the New States lease with 190 quarts from 2,283 to 2,310 feet with the bottom of the hole carried to 2,400 feet. This company's No. 2 also on their New States lease, in Section 5-18-28, is a good producer, after a 120-quart shot run from 2,195 to 2,224 feet with the bottom of the hole at 2,350 feet.

The Frontier Petroleum Co. and McQuigg Brothers have a nice completion in their No. 1 in Section 4-18-28, which was shot with 150 quarts from 2,266 to 2,308 feet with the pocket drilled to 2,338 feet. Sixteen hundred feet of fluid stood in the hole before the shot and the well should be good for 75 bbls. when put on production. No. 5 of this company is also preparing to be drilled in, having reduced the hole at 2,125 feet.

Two more producers have been added by Flynn, Welch & Yates in their No. 32 in Section 28-18-28 and their No. 34 in Section 29-18-28. The No. 28 was shot with 120 quarts from 2,103 to 2,133 feet with 220 quarts being used in the No. 34 from 2,091 to 2,148 feet.

Considerable interest is being shown in the many wildcats drilling, with the Arkansas Gas & Fuel Co.'s No. 1 on the Manning Dome, the Southern Exploration Co.'s No. 1 in Section 15-15-29 and the Snowden-McSweeney's No. 1 on the McNutt permit in Section 4-21-30 attracting most of the attention. This latter test, which is drilling at 4,208 feet, has had 500 feet of sand with a slight showing of gas. Efforts are being made to find a casing seat for the 5⅞-inch pipe which will be run inside the 6-inch to shut off a flow of water coming from around 4,000 feet.

Broken machinery has again shut down the Manning Dome test at 2,350 feet. This well is now reaching an interesting depth and the sand is looked for in the neighborhood of 2,500 feet.

Eighteen miles west of here the Hope Development Co.'s No. 1 Fite is also being watched closely, having passed through 6 feet of black shale or coal. This test is now down 1,100 feet.

Chabelco 1240

The *Genuine* Chabelco

SHOWN above are two links of Rex Chabelco 1240 dissembled so that you may judge the care and detail with which this chain is made to insure strength and accuracy in every working part.

But the Oil Field Man who knows his chain knows that all he needs to look for is the mark Rex Chabelco 1030 or 1240 on the side bars. He knows then that he has the chain that will not stretch.

Since Rex Chabelco 1030 and 1240 were first made they have continuously been built for the tough job of oil well drilling. How well they do the job is shown by the fact that in many fields all steel roller chain is known as Chabelco, whether it is Rex Chain or not.

You can always tell the genuine by the mark Rex Chabelco on every side bar.

GET GENUINE REX 1030 AND 1240

CHABELCO

CHAIN BELT COMPANY

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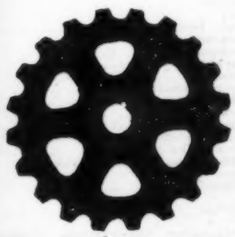
At left: strand of REX *genuine Chabelco 1030.*

Rex Safety Set Collar made of Certified Malleable Iron. Though stronger and more durable, it weighs only about half as much as a cast iron collar. Typical of the complete Rex transmission line.



Rex Temperim Sprocket Wheels have teeth and rim hardened to provide a harder surface of a tougher and more durable nature than the ordinary grey iron wheel.

The Chain Belt No. 210 Catalog and Engineering Data Book shown above consists of 512 pages. It lists in detail all information for the ordering and use of Rex Chain, Conveyors and Transmission Machinery.

Gulf Coast Oil Operations

By P. L. McGreal

Completion at Pierce Junction started at 3,500 bbls. and at close of week was flowing 1,700 bbls. 22 gravity crude. Production of Gulf Coast and Southwest Fields shows gain of 1,002 bbls. daily for week. Gulf Production Co. most active operator in Coastal area with Humble Oil & Refining Co. second.

HOUSTON, Tex., Dec. 7.—The gross production in the Gulf Coast pools increased 642 bbls. for the 7-day period ending December 5. The total is estimated at 96,072 bbls.

The completion of a well on the west side of the dome at Pierce Junction brought that pool up to an average of 3,100 bbls. per day from around 600 bbls. Goose Creek increased 565 bbls.; Humble, 120 bbls.; South Liberty, 300 bbls. The Hull Pool decreased 270 bbls. compared with the previous week; Lockport decreased 250 bbls.; Orange, 350 bbls., and West Columbia, 300 bbls.

The estimated daily average for each district is as follows:

District—	Gross bbls.
Batson	1,225
Blue Ridge	460
Barber Hill	90
Big Creek	1,060
Dayton	37
Damon Mound	1,070
Edgerly (La.)	470
Goose Creek	9,575
Humble	4,820
Hull	16,850
High Island	700
Jennings (La.)	1,675
Lockport (La.)	4,150
Markham	85
Orange	16,200
Pierce Junction	3,100
Spindletop	1,380
Saratoga	1,475
Sour Lake	4,075
South Liberty	10,650
Vinton (La.)	6,850
Welsh-Anse, La Bute (La.)	80
West Columbia	9,800
*Miscellaneous	95
Total	96,072

*Includes Nacogdoches, Piedras Pintas, Washington County and spots in South Louisiana.

Southwest Fields

The estimated daily average gross production in the southwest fields is placed at 41,795 bbls. for the week of December 5. This is an increase of 360 bbls. over the previous week. The Lockhart Field shows an increase of 600 bbls.; Luling is off 250 bbls. The other districts registered small changes either way. The estimate for each field is as follows:

Field—	Gross bbls.
Luling	21,250
Laredo	3,580
Somerset	2,325
Calliham	230
Rockdale-Minerva	1,010
Jim Hogg County	3,300
Hockhart	10,100
Total	41,795
Grand total for week	137,867
Grand total last week	136,865
Increase	1,002

Completions for Week

Completions during the week number 21, of which 5 were dry and 1 salt water. The new production totals 4,980 bbls. of which 3,500 bbls. initial came in at Pierce Junction late last week. The well dropped to 2,100 bbls., 7 per cent water, early in the week and at the close of the week was flowing 1,700 bbls. It is 22 gravity, grading as "B." The location is 400 feet north from No. 1 Settegast, which came in two months ago flowing 3,000 bbls. initial and is now making 300 bbls. of oil and 500 bbls. of water. The Rio Bravo Co. is rigging up No. 2-P Settegast, 400 feet south from the original well. The Gulf Production Co. abandoned No. 17 Taylor there at 4,385 feet, after drilling it deeper. No. 13 is now working over.

The following table shows the results of the week's activities in the Coastal section:

District—	Comp.	Prod.	Dry	Sw.	Bail.
Batson	1	25	0	0	0
Blue Ridge	0	0	0	0	1
Goose Creek	1	75	0	0	3
Hull	4	410	0	0	2
Jennings	1	75	0	0	2
Orange	5	860	0	0	3
Pierce Junction	2	3,500	1	0	0
Spindletop	3	20	1	1	0
Sour Lake	1	15	0	0	0
Vinton	0	0	0	0	1
Miscellaneous	3	0	3	0	0
Total	21	4,980	5	1	15
T'tl last week	13	6,560	1	3	8

List of Completions

In the Batson Pool, S. R. Buchanan's No. 84 Milhome is pumping 25 bbls. at 1,625 feet and No. 85 is bailing at 702 feet. The Gulf Production Co.'s No. 163 Wing is bailing at 550 feet and the Ada Belle Oil Co.'s No. 105 Paraffin is bailing at 495 feet.

At Blue Ridge, the Gulf Production Co.'s No. 3 West-Schenck on the south flank of the dome, is bailing at 3,850 feet, after being deepened. The Texas Co. has surrendered the Robinson lease on the west side of the dome, retaining 10 acres around one well. The company drilled 13 wells on this lease. The Gulf company has also surrendered a sublease on part of the Blakely on the north side of the dome. A late test went into rock salt at 4,450 feet there.

In the Goose Creek Pool, the Gulf Coast-Crown Central's joint No. 5 Galliard, a work over, will make a pumper at 2,570 feet. The Humble Oil & Refining Co.'s No. 64 Smith is bailing at 2,545 feet; the Sun Oil Co.'s No. 16 Smith at 2,475 feet, and the Gulf Production Co.'s No. 8 Houston-Galliard at 2,760 feet.

The wells completed in the Hull Pool were a combination of oil and salt water holes. The Gulf Production Co.'s No. 32 Phoenix, drilled deeper to 2,825 feet, is pumping 75 bbls. of fluid, 90 per cent water. The Mecom Oil Co.'s No. 3 Taylor, another deepened hole, is making 50 bbls., 17 per cent water. The Houston Production Co.'s No. 9 Barngrover is heading 200 bbls., 50 per cent water, at 3,245 feet. The Yount-Lee Oil Co.'s No. 7 Merchant is pumping 125 bbls. at 3,275 feet. The Republic Production-Houston Oil Co.'s No. 53 Dolbear, a work over, is bailing at 2,780 feet and No. 117 Dolbear, a new hole, at 3,975 feet. The Yount-Lee Oil Co.'s No. 6 Merchant, completed last week as a 425-bbl. producer, is now making 200 bbls. at The Texas-Vacuum's joint No. 6 Hannah, which came in last week flowing 400 bbls. at 3,570 feet, is on the air compressor flowing 270 bbls., 15 per cent water.

In the Jennings (Evangeline) Pool, The Texas Co.'s No. 26 Laterielle is pumping 75 bbls. at 1,865 feet. Its No. 103 Latrielle is bailing at 1,800 feet and the Ogden Oil Co.'s No. 5 Heywood is doing the same at 1,915 feet.

It was a rather quiet week in the Orange Pool as far as completed wells is concerned. The Continental Oil Co.'s No. 16 Chesson, which showed for a 4,000-bbl. well, but sanded, has been revived and is flowing 200 bbls. by heads at 4,610 feet. The Humble Oil & Refining Co.'s No. 19-A Chesson is flowing 500 bbls. at 4,750 feet. The Sun Oil Co.'s No. 6 Gunstream will make a pumper at 4,680 feet. The Atlantic Oil Producing Co.'s No. 3 Hager is pumping 25 bbls. at 3,420 feet, after being worked over. The Orange Petroleum Co.'s No. 7 Winifree is heading 35 bbls. at 3,570 feet and its No. 12 Chesson is swabbing at 4,650 feet. The Sun Oil Co. is bailing No. 1 Johnson at 4,725 feet and the Brownie Babbittee Oil Co.'s No. 3 Brown is bailing after drilling deeper to 4,950 feet.

In the old original Spindletop Pool, Weber King's No. 1 Henderson is a light pumper at 750 feet. Hamm-Brechlin Drilling Co.'s No. 2 Gladys got salt water at 707 feet. The Yount-Lee Oil Co. abandoned its proposed deep test in No. 1 Gladys at 810 feet.

The Humble Oil & Refining Co.'s No. 19 Bashara is flowing 15 bbls. by heads in the Sour Lake Pool at 3,600 feet.

In the Vinton (La.) Pool, the Vinton Petroleum Co.'s No. 3 Gray is bailing at 2,475 feet.

Outside of the defined pools, the Gulf Production Co. abandoned No. 6 Davis on the new Long Point dome in Fort Bend County at 625 feet in cap rock.

The Republic Production Co. abandoned No. 1 Carroll in the northern part of Orange County at 3,360 feet.

The Houston-Gulf Gas Co. quit No. 1 Reeves in Victoria County at 3,200 feet and abandoned a location made near Telferino.

The Refugio Oil & Gas Co. lost No. 1 Lambert in the gas section in the northern part of Refugio County. It was originally a wild blowout, forming a crater which widened, swallowing the derrick, rig and drill pipe. The company has lost three wells in that district by blowouts. This is the field from which Houston expects to secure part of its natural gas supply for domestic consumption.

South Louisiana

In the Vinton Pool, the Gulf Refining Co.'s No. 38 Vincent is drilling around 1,025 feet. The Texas Co.'s No. 1 Amos Gray is at 3,345 feet and No. 1-C Gray at 1,835 feet. The Vinton Petroleum Co.'s No. 16 Rescue is drilling around 1,875 feet. Marrs McClean's No. 8 Gray is drilling below 1,435 feet. The Edgerly Petroleum Co.'s No. 9 Vincent is clearing the hole.

In the Jennings Pool, The Texas Co.'s No. 58 Latrielle is sidetracking. F. I. Getty's No. 2 Jennings-Clement is drilling around 2,900 feet.

In the Lockport district, near Lake Charles, the Vacuum-Gulf Co.'s joint No. 5 Miller is drilling at 3,835 feet. No. 6 is rigging as is No. 2 Bordages. It is necessary to construct wooden bridges over the marshes to get the material to the locations. No. 2 Farquhar is drilling at 2,918 feet and No. 1 Freidberg & Wolf around 4,250 feet. The two joint interests have two unusually deep tests drilling there. No. 3 Lock-Moore is around 5,600 feet and No. 1 Prien Lake is below 5,870 feet. The Marland Oil Co. of Texas' No. 1 Phoenix is drilling around 5,410 feet. That makes three holes in the district each more than 1 mile deep.

South Texas Pools

Batson is becoming one of the most active of the older pools. The Kirby-Capital Oil Co. sidetracked at 3,400 feet in an effort to recover No. 3 Hodges on the north side, which came in wild one

(Continued on Page 111)

News from Fields of Canada

By Victor Lauriston

CHATHAM, Ont., Dec. 5.—In the Province of Prince Edward Island, an extensive development campaign has been launched by the Henry L. Doherty interests, following geological investigations carried on during the past summer which covered the entire island. The Doherty interests are working under an option originally secured from the Provincial Government by the MacKay interests of Sapulpa; and following the completion of the preliminary survey, large areas of promising territory were taken up. No. 1 test is located on Governor's Island, close to Charlottetown. This test spudded in December 1, the event being marked with considerable ceremony, Honorable J. D. Stewart, premier of the Province, pressing the lever which started the machinery in motion. It is planned to continue drilling through the winter; and additional tests will subsequently be started by the Doherty interests.

In the Ontario fields, drilling operations are practically inactive, outside the small Courtland gas field in Norfolk County, there the Dominion Natural Gas Co. is finishing one test and will shortly start another; while the Medina Natural Gas Co. is also drilling another test. In Kent County the activities of the Union Natural Gas Co., outside the unsuccessful No. 19 deep test in Dover, have been pretty well confined to cleaning out the old gassers in the Tilbury Field, the work considerably improving the prospective gas supply for the coming winter.

In Essex County, Bon Jasperson of Kingsville is reported cleaning out an old producing gasser drilled at the time of the first natural gas development in Essex County, with a view of bringing it back into production. It is reported that some new drilling will shortly be undertaken by the Union Natural Gas Co., either at some point in Kent County or in the Dawn Township Field, Lambton County; but no official announcement has yet been made as to this.

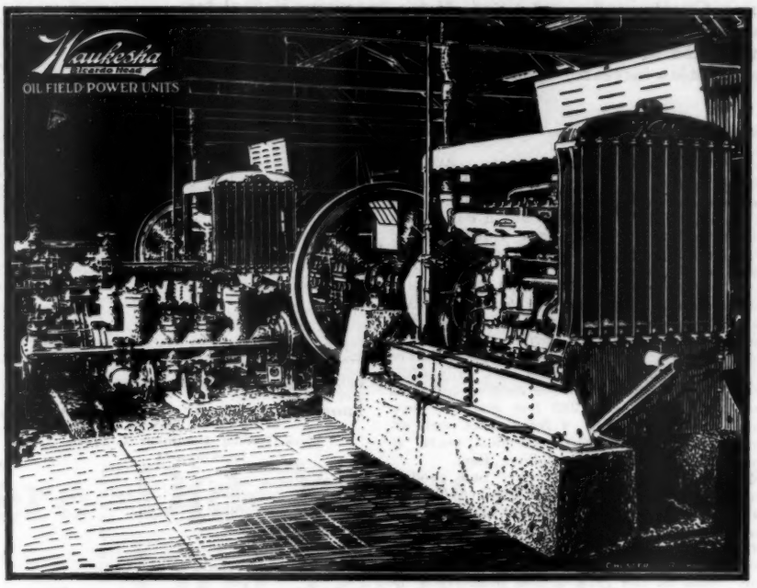
In the Canadian west, interest centers largely in the Turner Valley Field, southwest of Calgary. Vulcan Oils, Ltd., offsetting the Royalite Oil Co.'s No. 4, is being drilled deeper, the reported show of oil around 3,200 feet failing to develop commercial production. At 3,245 feet gas was encountered, but not in great quantities. Below 3,200 feet the drill worked for some distance in an exceedingly hard formation, but this at 3,260 feet had been drilled through. With oil showings and gas in the hole, the 8-inch casing is being run, and at last reports was down 2,000 feet, while 6-inch casing has been ordered for the lower hole. It is generally expected the test will have to be carried to the level of the Royalite No. 4, which got its main production at 3,740 feet, in order to get a real commercial oil sand.

In the same field, Royalite Oil Co.'s No. 5 has reached the depth of 2,525 feet and is having a little trouble with the tools stuck in the hole. Royalite No. 6 is reported drilling at 2,170 feet.

In the southern foothills, west of Nanton, the Rice Creek test of Imperial Oil, Ltd., is down 4,025 feet, at which depth the 8-inch casing will be set. In the northern foothills, west of Edmonton, the Coalspur No. 2 test is fishing at 3,985 feet.

In the Border Field, no new drilling is at present contemplated by Imperial Oil, Ltd., outside the Erickson Coulee test, Section 8-1-12w4, which has been rigged up, but will not spud in until next spring.

100 *H. P. Waukesha Oil Field Power Units operating high-pressure pumps*



Waukesha Power for a Booster Station

Down at Breckenridge, Texas, these two 100 H. P. Waukesha "Ricardo Head" Motors, operating on waste gas, are each handling a high-pressure pump—running 24 hours a day, and with a daily capacity of 380,000 gallons of water at an average pressure of 600 pounds. This is a real service job because it indicates so faithfully the sturdy reliability and simplicity of Waukesha Oil Field Power Unit Installations.

These units are built in powers from 15 to 100 H. P. Any of our representatives will be glad to tell you about them. The Oil Field Bulletin describing these units will be sent on request.

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Aeolian Building	*V. L. Phillips Co.*	*Wilson Machy. Co.*	*C. F. Camp Co.*	*Portable Rotary Rig Co.*	*Star Drilling Machine Co.*

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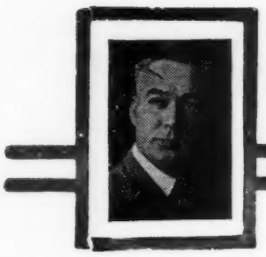


North-Central Texas Field

By George R. Kelley

Fresh water in Upton County well puzzles and alarms operators in that territory. Shallow showing in Tom Green County. Wildcat in extreme northern Throckmorton County and in Shackelford County. North Texas area had a good week and a production increase.

FORT WORTH, Texas, Dec. 7.—Oil men, who for several weeks have been anxiously watching developments at the Baker wildcat well of the Republic Production Co. in southwestern Upton County, Texas, are considerably upset over the report that the well is showing fresh water at 2,270 feet. This is regarded as a very unusual occurrence and so far oil men are at a loss to account for it. Some have advanced the theory that it is not at all impossible that the fresh water may be coming from above, possibly through a hole that might have been worn in the casing.

At any rate drilling has been suspended until something definite can be determined. Until this occurrence the well was looked upon, not so much as a commercial producer itself, but as a very important test of the district and a guide for further operations in that area, which it is generally believed holds an oil pool of large potentialities. The possibilities in southwestern Upton County are regarded with fully as much favor as those of Crockett County and by some with even a higher degree of favor.

Within a radius of 2 to 5 miles of this test something like a dozen locations have been made, practically all of them by major oil concerns or individuals or independents well financed and thoroughly capable of carrying them to completion. At least 10 of these wells should be drilling by, or soon after, the first of the new year. A close watch is being kept on the Kirby Petroleum Co.'s No. 1 Union Land Co., something like 2 miles southwest of the Baker well. At latest reports this well was nearing the 2,000-foot level and is expected to encounter the lime most any time.

Considerable interest is attached to the showing for production which the Roxana Petroleum Corp. encountered at a comparatively shallow depth in its No. 1 Clark in the extreme northwestern part of Tom Green County. Sand was encountered at 1,040 feet and at 1,055 feet showed considerable oil. At present the well is shut down for orders. This location is three-quarters of a mile northeast of No. 1 Clark of the Kanawha-Angelo Oil Co., which several months ago encountered a fairly good showing around 900 feet and at 1,100 feet.

Activity seems to be taking on new life in the shallow sand pool just north of the city of Brownwood in Brown County as the laying of the Humble Pipe Line Co.'s line from that pool to a connection with its main line in the northern part of the county, makes good progress. About half of the line has already been laid. Several new locations have been made in what is known as the Richardson shallow pool just north of Brownwood. So far there is only one producing well completed in that area. It is the No. 1 Richardson Fee, which is rated as a 30-bbl. well at 650 feet.

A new wildcat discovery of unknown proportions has been reported from the extreme northern part of Throckmorton County. It is No. 2 Upsher County School Land of Bridwell and others, Block 27. The sand was encountered at 1,278 feet and at 1 foot in, considerable oil and gas showed. The well is about 5 miles southeast of the Fincher gas well of D. H. Moore and associates, which is now shut in, but rated as a 5,000,000-foot gasser from a shallow sand.

Shackelford County reports a new wildcat discovery. It is the No. 1 Matthews, of Hayes and others, about 2 miles north of the town of Albany and a mile and a quarter northeast of the Tannehill Pool on the Moberly ranch. The well is estimated to be good for 25 to 30 bbls. daily from the sand at 1,143 to 1,148 feet.

The Independent Oil & Gas Co. has the showing for a good producer in its No. 1 Wolf in Archer County, though the well has not been completed. The well is flowing about 10 bbls. daily while being standardized for drilling in. Sand was found at 1,313 feet and has been drilled into only 4 feet. This well affects a 1,000-foot extension south to the next Texhoma Oldham Pool.

There are several other new producers yet uncompleted in Archer County. The No. 4 Rutty of the Magnolia Petroleum Co. produced 76 bbls. in 22 hours from sand at 888-892 feet and the Pandem Oil Corp.'s No. 3 Cockrell is swabbing at the rate of 150 bbls. from the sand at 1,446-51 feet. The No. 1 Hutcherson of Hill and others in the new Hutcherson Pool, swabbed 150 bbls. in 13 hours from sand at 1,381-82 feet.

South of the Electra district in Wichita County No. 2 Beaver-Electra of Perkins & Cullum is showing oil at 1,603-05 feet. These operators' first well on the Beaver-Electra lease was a fine producer.

In Wilbarger County the No. 1-B Waggoner of the Prairie Oil & Gas Co. is showing for a producer from the sandy lime formation at 2,303-43 feet. It is now standing 500 feet in oil and will be cleaned out and given a shot.

In northeastern Young County, No. 9 Campbell of the Hoffer Oil Corp. and Tidal Oil Co., in the Texhoma-Campbell district, is showing for a fine well, producing from the regulation depth around 880 feet, and swabbing at the rate of 300 bbls. daily.

North Texas Production Up

Production in the north Texas territory this week shows a substantial gain over the production a week ago. Total average daily runs this week are 170,240 bbls. as compared with 166,955 bbls. for the previous week. This makes a gain of 3,285 bbls.

This week made a much better showing than the previous week in completions and new production accounted for. There was a total of 84 completions this week as compared with 73 for the week before. This week there were 49 producing wells with a new production aggregating 11,300 bbls. daily as against 38 producers the week before with 3,520 bbls. of new production. The bulk of the new production this week came from Wilbarger County, Reagan County and the Cross Plains Townsite Pool in Callahan County.

Wilbarger County had 6 completions with a total new production of 2,420 bbls. or an average of more than 400 bbls. per well, while Reagan County had 3 new producers with an aggregate output of 3,330 bbls. or an average of 1,110 bbls. per well. The Cross Plains Pool had 5 new producers with a total of 2,050 bbls. new production, or an average per well of 410 bbls.

The following table gives the completions by districts together with totals for this week and the previous week for comparison:

District—	Comp.	Prod.	Dry	Gas	New Prod.
Wichita	6	3	3	0	270
Wilbarger	6	6	0	0	2,420
Archer	28	16	12	0	1,600
Young	14	5	9	0	645
Stephens	1	0	1	0	.....
Eastland	2	2	0	0	140
Brown	2	2	0	0	40
Reagan	3	3	0	0	3,330
Wildcats	21	11	6	4	*2,855
Total	84	49	31	4	11,300
Last week	73	38	29	6	3,520
Difference	11	11	2	2	7,780

*The wildcat districts reported four gas wells making an aggregate of 21,650,000 feet of gas daily.

PRODUCTION REPORT FOR NORTH AND CENTRAL TEXAS

Week Ending December 3, 1925

Burkburnett	
Gulf Production Co.	495
Humble Oil & Ref. Co.	360
Magnolia Petroleum Co.	3,060
Panhandle Refining Co.	270
Sinclair Oil & Gas Co.	50
Sun Oil Co.	75
The Texas Co.	435
Texhoma Oil & Ref. Co.	510
Miscellaneous	7,825
Total	13,060
Electra	
Empire Gas & Fuel Co.	945
Gulf Production Co.	805
Humble Oil & Ref. Co.	140
Magnolia Petroleum Co.	3,680
Panhandle Refining Co.	55
Prairie Oil & Gas Co.	120
The Texas Co.	3,550
Texhoma Oil & Ref. Co.	1,675
Miscellaneous	6,015
Total	16,995
Iowa Park	
Gulf Production Co.	40
Humble Oil & Ref. Co.	265
Magnolia Petroleum Co.	610
Panhandle Refining Co.	35
The Texas Co.	440
Texhoma Oil & Ref. Co.	50
Miscellaneous	4,005
Total	5,445
Wilbarger County	
Gulf Production Co.	40
Humble Oil & Ref. Co.	3,425
Prairie Oil & Gas Co.	20
Miscellaneous	10,610
Total	14,105
Archer County	
Empire Gas & Fuel Co.	930
Gulf Production Co.	2,245
Humble Oil & Ref. Co.	515
Magnolia Pet. Co.	1,740
Panhandle Refining Co.	180
Prairie Oil & Gas Co.	3,040
Sun Oil Co.	255
The Texas Co.	2,980
Texhoma Oil & Ref. Co.	2,125
Miscellaneous	19,700
Total	33,710
Stephens County	
Empire Gas & Fuel Co.	40
Gulf Production Co.	1,410
Humble Oil & Ref. Co.	765
Magnolia Petroleum Co.	430
Mid-Kansas Oil & Gas Co.	1,605
Prairie Oil & Gas Co.	910
Sinclair Oil & Gas Co.	70
Sun Oil Co.	190
The Texas Co.	1,280
Texas Pacific Coal & Oil Co.	1,280
Miscellaneous	6,450
Total	14,430
Ranger	
Gulf Production Co.	265
Humble Oil & Ref. Co.	40
Magnolia Petroleum Co.	625
Mid-Kansas Oil & Gas Co.	165
Panhandle Refining Co.	135
Prairie Oil & Gas Co.	675
Sinclair Oil & Gas Co.	360
The Texas Co.	160
Texas Pacific Coal & Oil Co.	835
Miscellaneous	2,770
Total	6,030
Moran	
Empire Gas & Fuel Co.	30
Humble Oil & Ref. Co.	10
Prairie Oil & Gas Co.	15
The Texas Co.	370
Texhoma Oil & Ref. Co.	80
Miscellaneous	1,980
Total	2,485
Young County	
Gulf Production Co.	240
Humble Oil & Ref. Co.	505
Magnolia Petroleum Co.	285
Panhandle Refining Co.	150
Prairie Oil & Gas Co.	10
Sinclair Oil & Gas Co.	375
Sun Oil Co.	65
The Texas Co.	690
Texhoma Oil & Ref. Co.	690
Miscellaneous	6,795
Total	9,805
Eastland-Comanche	
Empire Gas & Fuel Co.	10
Humble Oil & Ref. Co.	150
Magnolia Petroleum Co.	875
Mid-Kansas Oil & Gas Co.	175
Prairie Oil & Gas Co.	115
Sinclair Oil & Gas Co.	25
The Texas Co.	140
Texas Pacific Coal & Gas Co.	100
Miscellaneous	1,650
Total	3,240
Panhandle	
Carson County	2,465
Hutchinson County	2,720
Gray County	110
Wheeler County	35
Potter County	25
Total	5,355
Miscellaneous Pools	
Clay	385
Montague	745
Jack	25
Throckmorton	260
Baylor	350
Palo Pinto	560
Brown	2,305
Coleman	335
Callahan	5,720
Mitchell	2,980
Reagan	31,815
Scurry	55
Crockett	45
Total	45,580
Total this week	170,240
Total last week	166,955
Gain	3,285

Wichita County—Completions

Texhoma Oil & Refining Co. No. 1 Bentley, dry at 1,045 feet; Bullington and others' No. 10 Jennings, 25 bbls. at 1,495 feet; Hammon and others' No. 4 Waggoner Brothers, 65 bbls. at 1,741 feet; Magnolia Petroleum Co.'s No. 30 Maer, dry at 1,225 feet; Perkins and others' No. 1 Beaner-Electra, 180 bbls. at 605 feet; Straus and others' No. 1-B Allen-Kemp, dry at 1,845 feet.

Wilbarger County

Barkley and others' No. 5-A Stephens, 600 bbls. at 2,375 feet; Humble Oil & Refining Co.'s No. 20 Castlebury, 265 bbls. at 2,082 feet; Humble Oil & Refining Co.'s No. 26 Stephens, 210 bbls. at 2,428 feet; Humble Oil & Refining Co.'s No. 37 Stephens, 1,030 bbls. at 2,404 feet; Landreth Production Co.'s No. 2-F Waggoner, 190 bbls. at 1,899 feet; McCamey and others' No. 9 Stephens, 110 bbls. at 2,373 feet.

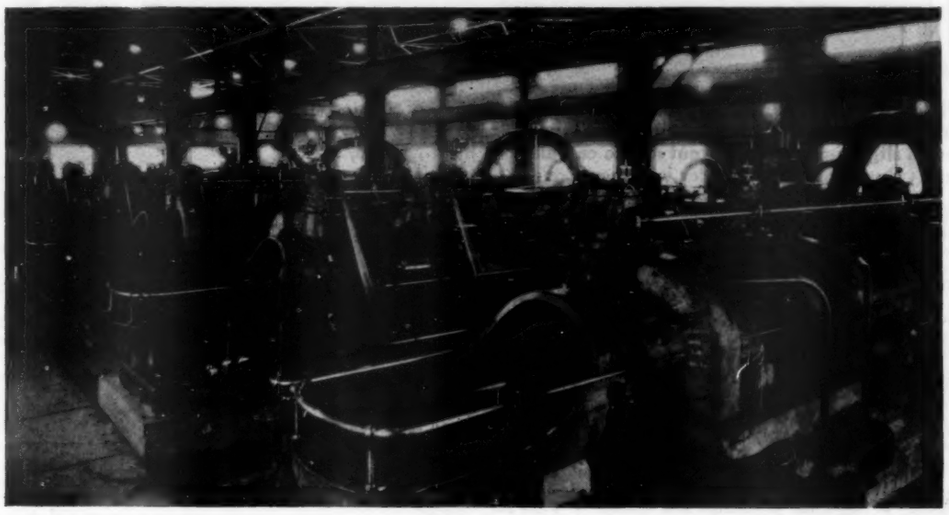
Archer County

Boller and others' No. 8 Wilmot, 20 bbls. at 1,408 feet; Consolidated Oil Co.'s No. 1-A Cowan, dry at 1,260 feet; Empire Gas & Fuel Co.'s No. 15-B Wilson, 20 bbls. at 1,409 feet; Empire Gas & Fuel Co.'s No. 24-C Wilson, 35 bbls. at 1,626 feet; Fletcher and others' No. 1 Cowan, dry at 1,531 feet; Kentucky Oil Corp.'s No. 1 Jackson, dry at 1,603 feet; Maer and others' No. 1 Young, dry at 1,402 feet; Pace and others' No. 3 Miller, dry at 1,607 feet; Rowe Drilling Co.'s No. 1 Oil Investment Co., dry at 1,481 feet; Shasta Oil Co.'s No. 1 Kemp & Kempner, dry at 1,955 feet; Staley and others' No. 1 Helm, dry at 1,850 feet; Staley and others' No. 1 Parrish, 75 bbls. at 1,581 feet; Stewart and others' No. 6 Plowman, 50 bbls. at 1,021 feet; Young and others' No. 2 Fee, dry at 1,418 feet; Davis Hart Co.'s No. 1 Wilborn, 95 bbls. at 1,351 feet; Magnolia Petroleum Co.'s No. 2 Portwood, 300 bbls. at 1,397 feet; Magnolia Petroleum Co.'s No. 3 Portwood, 115 bbls. at 1,399 feet; Marland Oil Co.'s No. 5 Richardson, dry at 1,333 feet; Pandem Oil Corp.'s No. 2 Cockrell, dry at 1,506 feet; Pandem Oil Corp.'s No. 2 Young, 175 bbls. at 1,442 feet; Prairie Oil & Gas Co.'s No. 31 Richardson-Mayfield, dry at 1,358 feet; Sun Oil Co.'s No. 4 Richardson, 60 bbls. at 1,447 feet; The Texas Co.'s No. 2 Boren, 40 bbls. at 1,091 feet; Trio Oil Co.'s No. 5 Brown, 75 bbls. at 1,408 feet; Trio Oil Co.'s No. 6 Brown, 250 bbls. at 1,410 feet; Texhoma Oil & Refining Co.'s No. 2 Oldham, 30 bbls. at 1,337 feet; Verschoyle and others' No. 1 Young, 75 bbls. at 1,444 feet.

Young County

Bashara and others' No. 2 Marshall, 165 bbls. at 2,837 feet; Clark and others' No. 2 Campbell, 80 bbls. at 1,007 feet;

(Continued on Page 121)



Where Did You Go for Your First Diamond?

Remember how you felt the day you made up your mind to buy it. It seemed that the whole town was watching you. But you went straight past the bargain stores and on through the door of a firm that had been selling diamonds from the same vault for 25, maybe 50 years.

Not many of us know much about diamonds and you, like the rest of us, probably chose a diamond merchant who had built a reputation for honest business dealing. You didn't haggle about price because the purpose for which you were buying that first diamond made it desirable for you to be able to think in future years, "I bought the very best that I could afford." Have we ever been sorry that we did it just that way?

It's a long jump from diamonds to gas engines, but do you know that every year more of the larger, and smaller companies, too, are buying gas engines just like you bought your first diamond—from an old established firm which has been conscientiously and faithfully serving machinery buyers for 92 years. In fact, during recent years so many have chosen to buy gas engines on this basis that today, by reason of standardized quantity production, you get the greatest value when you choose Cooper engines.

Cooper engines are built in standard sizes from 80 to 1500 B.H.P. for every power purpose. The above photo shows seven 1000 B.H.P. units in United Fuel Gas Co.'s Lewis compressor station near Charleston, W. Va.

THE C. & G. COOPER CO., Mt. Vernon, Ohio

1605 Kirby Bldg., Dallas **504 Kennedy Bldg., Tulsa**
317 Bank of Italy Bldg., Los Angeles

Oklahoma Field Operations

By J. L. Dwyer

Garber Field deep sand horizon shows further rapid decline in production, the drop averaging about 20,000 bbls. daily during past week. Southern Oklahoma showed slight increase in output due to completions in Seay Pool, Jefferson County. Burgess sand producer in Osage County.

Following the well established rule that whatever goes up must come down, the daily production of the deep sand in the Garber Field in Garfield County, Oklahoma, hit the toboggan, and made a swift descent. For the week just passed this sand at Garber shows a decrease of approximately 20,000 bbls. in daily average. Garber has proved to be such a chameleon that all predictions as to its productivity are futile. That implement which follows flush production, namely, the swab, is now in use on 19 deep sand wells in this field and this fact is very significant. On Monday of this week a slight upward trend in production was shown, owing to the drilling in of the Roxana Petroleum Corp.'s No. 9-W Schroeder, which was drilled from 4,270 to 4,323 feet and made 2,911 bbls. the first day. This added production gave the field an increase of 757 bbls. over the previous 24 hours, so the appreciable drop in the remaining wells can be seen. On Monday the deep sand production at Garber was 39,846 bbls.

A list of the production of the Garber Field deep wells for Monday of this week follows:

Well—	Oil	Water
Roxana Petroleum Corp.:		
1-W Schroeder	220	875
2-W Schroeder	135	583
3-W Schroeder	2,013	1,200
4-W Schroeder	45	700
5-W Schroeder	4,184	536
6-W Schroeder	1,310	3,000
7-W Schroeder	560	1,500
8-W Schroeder	2,600	800
9-W Schroeder	2,911	140
Marland Oil Co. & Mid-Continent Pet. Corp.:		
41 School Land	128	80
42 School Land	235	30
43 School Land	75	26
44 School Land	25	26
45 School Land	400	300
47 School Land	160	45
53 School Land	768	2,000
54 School Land	435	390
55 School Land	330	...
58 School Land	550	...
61 School Land	550	50
Roxana Petroleum Corp.:		
1-W Wolfe	325	225
2-W Wolfe	1,242	65
Healdton Oil & Gas Co.:		
29 Belveal	25	...
30 Belveal	18	25
31 Belveal	40	...
The Carter Oil Co.:		
54 Dively	295	...
Sinclair Oil & Gas Co.:		
19 Hartley	12,132	1,200
10 Shaffer	145	...
25 Belveal	160	240
26 Belveal	115	175
27 Belveal	350	160
29 Belveal	500	...
30 Belveal	128	...
25 Denker	50	10
26 Denker	150	300
20 Kisner	320	...
21 Kisner	1,137	935
22 Kisner	318	200
20 C. K. Walker (N.)	438	325
23 Walker	2,245	165
26 Walker	410	...
27 Walker	1,870	...
Total	39,846	16,306

Increase in South End

Southern Oklahoma showed an increase in production which steadied the rapidly declining average of the State. The chief spot of interest in the south at present is the Seay Pool in Jefferson County.

Two months ago, the Gypsy Oil Co. revived interest in this region when it completed a well which had an initial flow of better than 1,000 bbls. During the past week, the Carter Oil Co.'s No. 1 Seay, SW cor. NE NE, Section 33-6s-5w, a direct offset to the Gypsy Oil Co.'s No. 8 Arpellar, had the sand at 1,468-1,503 feet and made 1,555 bbls. the first 24 hours. It increased until a high figure of 2,520 bbls. was recorded and at present it is making 1,975 bbls. daily. The Gypsy Oil Co.'s No. 8 Arpellar, NW cor. SE NE, Section 33-6s-5w, is now producing 500 bbls. of oil and 500 water.

The largest transaction to be recorded during the week was the sale by the Galvez Oil Co. of its Davenport lease to The Texas Co. This lease (the west half southeast quarter Section 2-14-5) had one producing well two weeks old. It had an initial production of 1,150 bbls. and at present is making 765 bbls. The price was reported to be $500,000 cash and $500,000 in oil.

Production of Pools

The status of some of the pools in Oklahoma follows, giving the daily average production and number of wells for the week ending December 4:

Pool—	Wells	Prod.
Davenport	73	20,987
Otoe	21	3,164
(Increase 355 bbls.)		
Thomas	15	16,377
(Decrease 374 bbls.)		
Hubbard	31	2,146
(Decrease 223 bbls.)		
North Braman	24	1,611
(Decrease 130 bbls.)		
South Braman	17	5,527
(Decrease 431 bbls.)		
Papoose	207	14,117
(Increase 1 well and 65 bbls.)		
Wewoka	143	8,017
(Decrease 819 bbls.)		
Cromwell	405	21,424
(Decrease 2 wells and 424 bbls.)		
South Weleetka	47	2,021
(Increase 56 bbls.)		
Yeager	12	860
(Increase 1 well, decrease 55 bbls.)		
Holdenville	12	210
(Decrease 35 bbls.)		

Burgess Sand Well

In the northern end of Osage County, Titus & Norris have a good Burgess sand well in No. 2, SE cor. SW NE, Section 7-21-11. Sand was at 2,047-2,054 feet and the well started flowing at the rate of 375 bbls. natural.

In the Deep Rock Pool in Payne County, the Deep Rock Oil Co.'s discovery well is still making 335 bbls. It is No. 1 Goodno, SE cor. SW NE, Section 23-18-3. The Deep Rock Oil Co.'s No. 2 Goodno, SW cor. NE, Section 23-18-3, has a fishing job in the sand, 4,290-4,313 feet, and is flowing 185 bbls. around the lost tools. Deep Rock Oil Co.'s No. 2 Boyles, NE cor. SW SE, Section 23-18-3, had the Bartlesville sand at 3,710-3,750 feet and made 296 bbls. the first day. Deep Rock Oil Co.'s No. 3 Derry, SE cor. NW SE, Section 23-18-3, made 118 bbls. from the Bartlesville sand, drilled to 3,710-3,752 feet. The Pure Oil Co.'s No. 1 Ostrander, SE cor. NW, Section 23-18-3, had the Wilcox sand at 4,306-4,333 feet and made 190 bbls. the first day. The Mulberry Oil Co.'s Haley lease in this field is making 880 bbls. from two wells.

In the Holdenville area, J. W. McCulloch's No. 1 Brown, SE cor. SW NE, Section 27-8-8, had 5,000,000 feet of gas in the top of the sand at 3,200 feet and it is being prepared to drill in. The Mid-Kansas Oil Co.'s No. 1 MacFarland, NW cor. NW SW, Section 27-8-9, had 2,000,000 feet of gas in sand topped at 3,125 feet and this increased to 8,000,000 feet of gas at a depth of 3,140 feet.

Near Okemah, the Gilcrease Oil Co. completed a gas well in No. 1, SE cor. NE, Section 35-11-9. Sand was at 2,865-2,946 feet and the well is shut in with 12,000,000 feet of gas.

Two miles north of the Graham Pool in Carter County, Oklahoma, Lively & Tucker have a well in No 1 Pierce, SE cor. NW SE, Section 7-2s-2w. This well had broken sand at 1,573-1,715 feet and made 175 bbls. of 25 gravity oil on the swab the first 24 hours.

In eastern Pawnee County, across the line from the Osage, the Gypsy Oil Co.'s No. 12 Norman, SW cor. NE, Section 35-21-8, had the Tucker sand at 2,538-2,549 feet and started flowing at the rate of 75 bbls. an hour. It is now producing 896 bbls.

Noble County

In the Billings Pool, the Mid-Continent Petroleum Corp. has a dry hole in No. 11-A Washburn, NE cor. SE SW, Section 15-23-2w, which is abandoned at 4,180 feet. This is an old well drilled deeper.

Kay County

Cortez Oil Co. has a duster in No. 1, SE cor. NE SE, Section 1-28-3, which is dry and abandoned at 4,367 feet.

Grant County

A. D. Morton has a failure in his wildcat well No. 1, CNE Section 21-28-4w, which is dry and abandoned at 3,835 feet.

Lincoln County

In the Skelly-Ford area, the Skelly Oil Co.'s No. 3 Ford, SE cor. NE NE, Section 7-15-6, had a shell 4,047-50 feet, sand 4,050-64 feet and made 826 bbls. the first 24 hours. It is not completed.

In the north end of the Davenport Pool, the Prairie Oil & Gas Co.'s No. 1 Sporleder, SE cor. NE SW, Section 35-15-5, had the smallest body of sand that has been found in the pool, 22 feet. It was from 3,350-72 feet and the well flowed 162½ bbls. the first 24 hours. It is being cleaned out. Devonian Oil Co. had built the rig for No. 2 Kealer, SW cor. NW NW, Section 1-14-5. Carter Oil Co.'s No. 4, SE cor. NW NE, Section 2-14-5, is drilling at 1,275 feet, and the rig is being built for No. 5 Tuttle, NE cor. NE, Section 2-14-5. Galvez Oil Co. has the rig on the ground for No. 4 Baker, NW cor. SW SE, Section 2-14-5. Magnolia Petroleum Co.'s No. 9, NE cor. SE NW, Section 2-14-5, had the sand 3,284-3,376 feet with the first oil at 3,332 feet. It made 685 bbls. the first 24 hours. Skelly Oil Co.'s No. 2, SW cor. NE, Section 2-14-5, had sand 3,283-3,381 feet and made 1,048 bbls. the first 24 hours.

Payne County

Wentz Oil Corp. has spudded No. 1 Grindstaff, NW cor. NE SW, Section 23-20-4.

Kingfisher County

A wildcat well to be drilled in Kingfisher County is McKinney & Crawford's No. 1 Sturgeon, NE cor. SW, Section 27-16-6w. The rig is on the ground for this test.

Garfield County

In the Garber Field, the Sinclair Oil & Gas Co. is drilling at 1,360 feet in No. 29 N. Walker, SE cor. NE NE, Section 13-22-4w, and No. 27 Walker, SW cor. SE NE, Section 13-22-4w, had the sand 4,270-4,315 feet and is good for 2,700 bbls. naturally. Sinclair's No. 25 Walker, SE cor. SW NE, Section 13-22-4w, had sand 4,390-4,407 feet and made 40 bbls. naturally. It was shot with 60 quarts and made 124 bbls. Sinclair Oil & Gas Co. is rigged up and shut down in No. 28 Denker, NW cor. NE SW, Section 13-22-4w. Roxana Petroleum Corp.'s No. 2-W Wolfe, NE cor. SE NW, Section 13-22-4w, had the sand 4,430-47 feet and gauged 2,839 bbls. the first day. Marland Oil Co. and Mid-Continent Petroleum Corp.'s No. 58

(Continued on Page 78)

Kansas Oil Field News

By J. L. Dwyer

A pre-holiday lull descended over the Kansas oil fields last week, with no heavy news coming forth. In the Rainbow Bend district, the number of drilling operations has touched a low figure. There are four wells very close to the pay and in this region which should be heard from next week.

Cowley County generally is picking up in the number of wildcat operations. The majority of these tests are situated in the territory adjacent to the Dexter anticline. There is a lot of new work starting in Township 33-6. These wells have as their goal, the shallow Peru sand.

In Sedgwick County, Mark Curtis and others are drilling in lime again at 3,938 feet in No. 1 Johnson, in Section 19-29-1w. This well went out of the Mississippi lime at 3,934 feet and if nothing is found it will be abandoned at 3,950 feet.

North of Wichita, D. C. Lamson and others apparently have a failure in No. 1 Mills, in Section 7-26-2. Two weeks ago at a depth of 2,991 feet, this well had a show of oil, and the pipe was underreamed. A hole full of water was found. An effort will be made to drill the well deeper.

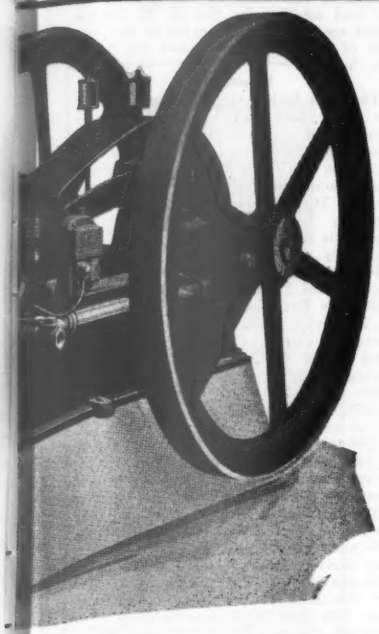
Greenwood County

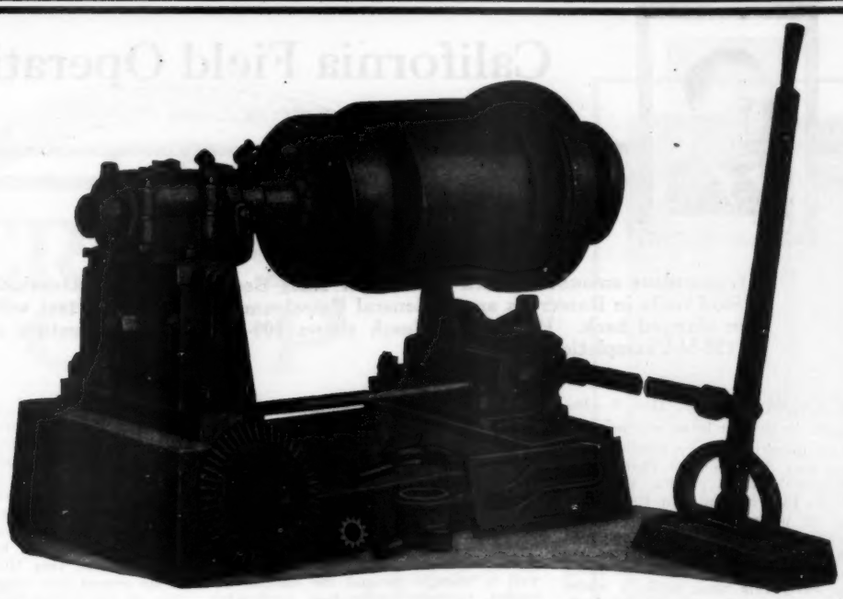
In the Polhaums Pool in Greenwood County, Fountain and others have a rig up.

In the Sallyards Pool in the same county, Huff & Roth have a rig built for No. 1 Trigg, NW cor. NW, Section 20-26-9. John Rogers and others have completed a well in No. 10, SW cor. SE NW, Section 29-26-8. Sand was found 2,695-2,825 feet and the well was shot wtih 140 quarts. It is making 35 bbls. of oil and 250 bbls. of water. Tom Miller and others' No. 1, NW cor. NE, Section 31-26-8, had sand 2,680-2,762 feet and is making 20 bbls. of oil and a large quantity of water.

In the Teeter Pool, Phillips Petroleum Co. has a rig on the ground for No. 8 Morris, CWL NW SW, Section 19-23-9. Empire Gas & Fuel Co.'s No. 6, NW cor. SE SE, Section 24-23-8, had sand 2,568-99 feet with 1,100 feet of oil in the hole. It is not completed. Empire Gas & Fuel Co. is drilling at 350 feet in No. 7, CEL NE SE, Section 24-23-8. Greenland Oil Co. and Phillips Petroleum Co.'s No. 2, SE cor. NE SW, Section 25-23-8, had sand 2,511-30 feet with 1,100 feet of oil in the hole. Roberts and others' No. 8, NW cor. SW NE, Section 25-23-8, had sand 2,566-89 feet and was shot with 80 quarts. It has 1,000 feet of oil in the hole. Greenland Oil Co. and Hays & Robertson have the rig up for No. 9 Scott, NW cor. NE, Section 25-23-8. Mission Oil Co. has the rig up for No. 4-B Dalas, NE cor. NW, Section 25-23-8. Greenland Oil Co. has the timbers on the ground for No. 3 Craft, SW cor. NW SW, Section 25-23-8. Phillips Petroleum Co. has spudded No. 1, NW cor. SE SE, Section 26-23-8. Greenland Oil Co. and others are drilling at 450 feet in No. 16, NW cor. SE NE, Section 10-23-9, and No. 18, NW cor. NE SE, Section 10-23-9, is completed for 150 bbls. after a shot of 180 quarts in sand 2,300-65 feet. Skelly Oil Co.'s No. 2, C S half NW SE, Section 15-23-9, is dry and abandoned at 2,396 feet after a shot of 240 quarts in sand 2,336-96 feet. It had a show of oil in this sand. Empire Gas & Fuel Co.'s No. 29, NE cor. SE SE, Section

(Continued on Page 112)





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Marionhill Pitman

Kutch and Marek

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No. 199 Marion Steel Derricks
No. 200 Irish Pulling Machines
No. 202 Marion Peerless Reversible Clutch
No. 203 Marion Gas Engines
No. 205 Marion Band Wheel Powers
No. 206 Marion Sand-Proof Working Barrel
No. 214 Marion Hi-Test Sucker Rods
No. 217 Marionhill Pitmans
No. 230 Marion Metal Buildings

Marion Machine, Foundry & Supply Co.

Marion, Indiana

Marion Hi-Test Sucker Rods
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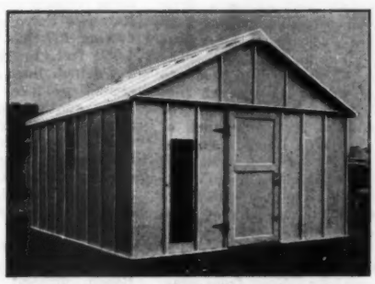

Marion Metal Buildings for the Oil Fields

Marion Steel Crown Block

Marion All-Metal Band Wheel

California Field Operations

By L. P. Stockman

Tremendous amount of work planned for Long Beach northwest extension. Good wells in Rosecrans area. General Petroleum Co.'s 6,109-foot test will be plugged back. Huntington Beach shows 600-bbl. well and Ventura a 1,190-bbl. completion.

LOS ANGELES, Calif., Dec. 5.—Developments in the northwest extension of the Long Beach Field are coming thick and fast and the stimulant provided by the Kahlbush & Johnston well just brought in has resulted in a tremendous amount of projected work which will carry operators several hundred feet still farther north. Kahlbush & Johnston are getting a lot of credit for their well which blew in early this week while a water test was being made on the 6¼-inch, set at 4,290 feet, but, as a matter of fact, they are bemoaning their ill luck. It so happened that negotiations had been started previously with Van B. Foster to take over the project and the well had only been sold the day previous to the blowout. It will, therefore, in the future be known as well No. 75 of the Van Foster Co. Previous to the blowout, indications were not any too favorable, and the lack of gas resulted in the failure to take the necessary precautions. The well had shown a little gas, but it was not deemed necessary to put on a control head, as the pay was not expected for another 300 feet. The result was that when the well began to flow it threw a stream of oil high into the air over the crown block and painted the entire landscape for a distance of several hundred feet. Locust Avenue, the next street west of the well, was turned into a veritable sump hole for more than a block after the well broke loose and the beautiful residence of F. J. Leeds and the Millhisker home nearby were given a bath of crude oil. The flood of oil also forced the suspension of work on several lead lines from nearby properties as the trenches became filled with oil. Rig and tank construction was also halted because of the fire hazard. The well was capped after flowing for two days and, although no actual gauge is available of the production during this period, it is conservatively estimated at 2,500 bbls. of oil and 5,000,000 feet of gas. It is today tanking a little better than 1,000 bbls. and, in view of the fact that producing wells in the northwest extension are holding up fairly well, and also to the favorable gas pressure, no appreciable decline is expected to take place for several weeks. The action of this new producer is particularly interesting in view of the fact that it is about 300 feet shallower than other recent completions in this same extension. Instead of hitting the pay a little deeper than those nearer the center of the field the well actually went on production much higher up. There is apparently a saddle at this point and this accounts for the fact that production is coming from 4,296 feet, instead of around 4,600 feet. This extension, which at present resembles the neck of a bottle, is capable of exerting quite an influence on State production if development work is pushed to the limit and the action of operators in this respect is naturally of paramount importance. The property is practically all held by individual operators who will undoubtedly push development work to the limit as long as their finances hold out. If this policy is followed out the neck will be both widened and lengthened. It is reported that one of the larger companies has offered to advance a considerable sum to be repaid in oil and this may result in considerable new work.

It is a little too early to say how much higher the daily production at Long Beach will go, reacting to this present development work, but it would not be at all surprising if this remarkable field again exceeded 125,000 bbls. a day within the next three or four months. This is a rather conservative figure based on the present proven limits. If another producer like the Kahlbush & Johnston well is brought in and the district extended farther north, field production will probably exceed the estimate above. The Shell's old Los Cerritos well, of course, will prevent the northern limits of the field from moving more than a half a mile farther north, as this was abandoned as a duster. Part of the intervening territory, however, will most likely be productive and drilled up on a town lot basis.

There were three other producers finished in the extension during the week in addition to Foster's No. 75, each of them running around 500 bbls. daily. The Rainbow Petroleum Co.'s No. 3 came in flowing 497 bbls. of 22.8 gravity oil from 4,580 feet, the hole being finished with a 6¼-inch liner. This is the Rainbow's second producer and the company expects another in shortly, as No. 4 is now at 4,110 feet. No. 5 will follow No. 4 into production and, although No. 6 has not yet been spudded in, it should get under way shortly. No. 1 Grant of the Ring Petroleum Co., drilled to an even 4,500 feet and finished with a 6¼-inch liner, was good for 480 bbls. of comparatively clean 22.6 gravity oil. Featherstone & Preston's No. 10 Long Beach, finished at 4,550 feet, came in flowing 410 bbls. of 21.3 gravity oil and, although the output showed a cut of 8 per cent, it will undoubtedly clean up after being on production for a few days. No 11 Long Beach is drilling ahead in the oil sand at 4,460 feet, while No. 12 is in a sandy shale at 4,250 feet. Rigs are going up for Nos. 14 and 15 and Featherstone & Preston intend to start immediate work on both. George W. Johnston lost very little time spudding in his second hole following the completion of his initial well a week or 10 days ago, and reports a depth of 4,000 feet. The California Petroleum is starting a new well in a section of the northwest extension, which, during the past few months, has become a center of drilling activity almost as intense as the early development of the field. In addition to starting work on No. 1 Green, the company is making preparations to spud in another hole on its Fields lease. The new well will be No. 17 in the northwest corner of the lease and just south of J. E. O'Donnell's property, which has yielded several 500 and 600-bbl. wells during the past two months. The California Petroleum Co. announced the consummation of a deal last week whereby it has purchased the producing well of Craig & Burns, an offset to its No. 15 Fields. Acquisition of the Craig & Burns property is one of many similar deals which are being made throughout the field by the California Petroleum, United and various other producers.

It is estimated that the oil revenues accruing to the City of Long Beach due to the sale of oil and gas produced on municipal owned land will be increased approximately $150,000 a year within a short time, as the result of the completion of two wells by the Ramsey Oil Co. and another by the A. T. Jergins Syndicate. All three, located in the older part of the field, have passed the 4,000-foot level.

Rosecrans

That the Union Oil Co. has overcome the jinx which has been following its development work at Rosecrans, is evidenced by the improvement shown by the wells on its drilling report and the completion this week of a good well in No. 19 Howard Park. Heretofore the company has been engaged in drilling line wells and offsets almost exclusively, and very little information was available as to the potentiality of the central part of the Howard Park property, in which the Barnsdall Oil Co. has retained an interest. It has been realized right along, of course, that this is the best lease in the field, but it takes real producing wells to absolutely confirm theories. No. 19, the company's current completion, is in the north central part of the property midway between No. 18, a 395-bbl. well to the east, and No. 29 to the west, at present drilling in the oil sand at 4,976 feet. There are several locations remaining between these three wells for additional work and this line should be a good one when drilled up. The most gratifying part of the production derived from No. 19, 350 bbls. of 38.4 gravity oil, was the unusual small cut, one-tenth of 1 per cent. The pressure, 335 pounds, is also very satisfactory, as the gas is forcing the production through a ½-inch orifice very evenly. The hole was carried down to 4,707 feet and finished with an 8¼-inch oil string. The company has not yet made a test of No. 4 Trust, which looks fairly good for deep production, but should do so sometime within the next week. A very promising sand was encountered between 5,638 feet and 5,674 feet, which, if commercially productive, will mean much in the future development of the lease. Heretofore this property has been considered only productive in the extreme northern part.

The Barnsdall Oil Co. has recemented No. 7 O'Dea, a 4,078-foot hole, for the second time and, although some water trouble has been experienced, the company will eventually be successful in securing clean production, as the well seems to be far enough in from the edge to yield commercial production. No. 7 Rosecrans, another Barnsdall well, has an excellent sand at 4,430 feet and it is quite probable that an early test will be made instead of going after the deeper sand. The wonderful success which the Marland had recently in recompleting its No. 2 has resulted in the decision to follow a similar procedure in No. 3, which has dwindled down to but a few barrels a day. The company will, accordingly, begin perforating at 4,600 feet and continue down to around 4,700 feet, from which depth the well will be given a test. No. 2, which came in rather prematurely a few weeks ago doing 4,000 bbls., has settled to 1,600 bbls. a day.

Deep Test Failed

The General Petroleum has given up the idea of getting deep production in No. 1-A Vaughn, drilled to 6,109 feet, and will plug back and test out a few minor upper showings. The company has drilled four holes on its Vaughn lease to date, but has not yet succeeded in securing any production. No. 1 was carried down to 4,752 feet, No. 2 to 4,831 feet and No. 2-A to 5,303 feet.

Inglewood

Although only a small amount of new production was added at Inglewood this week, the daily production did not show any unusual decline. This was rather surprising, as it was thought the daily output would drop off somewhat. The most important factor preventing a precipitous drop is the unusually large penetration with which producers in this field are favored. The greater part of the 75 flowing wells, producing 55,000 bbls. daily, have a penetration in the oil sand running from 500 to 1,500 feet. A very pronounced decrease in gas pressure has been noted during the past few weeks and this, together with edgewater encroachment, which has already made its appearance in several wells, will prob-

TANKER SHIPMENTS FROM LOS ANGELES HARBOR TO ATLANTIC AND GULF COAST PORTS

Agwistone, November 23, New York, crude	106,229
John D. Archbold, November 24, New York, crude	136,991
Guiftrade, November 27, Port Arthur, refined	81,508
Nora, November 28, Philadelphia, crude	88,703
Hadnot, November 29, Boston, crude	75,923
Swiftsure, November 29, Fall River, crude	79,863
Coastwise	
W. S. Miller, November 23, Richmond, crude	74,229
Los Angeles, November 24, Martinez, crude	70,191
Lebec, November 24, Portland, fuel	75,169
Alaska Standard, November 24, San Diego, refined	12,701
Deroche, November 24, Oleum, crude	72,020
Utacarbon, November 25, Martinez, crude	75,775
K. R. Kingsbury, November 25, Richmond, crude	83,588
Mojave, November 25, Seattle, fuel	65,108
R. J. Hanna, November 26, Point Wells, refined	75,310
Cathwood, November 26, Martinez, crude	75,001
D. G. Scofield, November 26, Richmond, crude	77,422
Alaska Standard, November 27, San Diego, refined	12,716
J. A. Moffett, November 27, Portland, fuel	62,796
La Brea, November 27, Oleum, refined	67,554
Frank G. Drum, November 28, Avon, crude	73,727
W. S. Miller, November 28, Richmond, crude	74,007
Salina, November 29, Seattle, fuel	55,471
Los Angeles, November 29, Martinez, crude	70,302
K. R. Kingsbury, November 29, Richmond, crude	81,988
Deroche, November 29, Martinez, crude	80,116
La Placentia, November 29, Oleum, crude	73,704
Dayton, November 29, Seattle, tops	50,014
Exports	
San Teodoro (Br.), November 25, London, refined	64,110
Radix (Br.), November 26, Japan, refined	70,526
Inverurie (Br.), November 26, London, refined	62,108
G. Harrison Smith (Br.), November 27, Chile, fuel	123,679
Corbis (Br.), November 28, Balboa, fuel	55,652
San Lorenzo (Br.), November 28, Montevideo, fuel	109,278
Victolite (Br.), November 29, Montreal, crude	98,541
H. M. Storey, November 29, Halifax, crude	105,416
From Ventura	
Tulsagas, November 23, Avon, crude	74,380
Oleum, November 26, Martinez, crude	32,900
From Port San Luis	
Oleum, November 23, San Diego, fuel	30,836
Agwipond, November 24, Wellington, fuel	90,643
Montebello, November 26, Vancouver, fuel	73,915
From San Francisco	
Warwick, November 22, Seattle, refined	33,718
Kewanee, November 25, Seattle, refined	39,457
Frank H. Buck, November 27, Linnton, fuel	60,754
Lubrico, November 27, Point Wells, refined	84,123
William F. Herrin, November 28, Seattle, fuel	46,057
Gargoyle, November 29, Philadelphia, refined	80,451

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ably offset the advantage at present accruing to the unusually favorable penetration. A normal decline is naturally expected in the flowing wells, and the drop registered in gas pressure will undoubtedly result in a general drop during the next 30 days. The Associated Oil Co. brought in No. 42 Vickers in the western part of the field doing 365 bbls. from 2,133 feet, the oil testing 17.6 degrees and showing a cut of 5 per cent. This completion is of importance, not only because of the output secured, but because of the fact that it was somewhat of an experiment. The sands in this section of the field are streaked with water sand and the company decided to complete the well in the upper part of the zone without passing through the water sand. The gravity of the oil secured in the upper part of the zone is somewhat heavier than that secured farther down, but it is, nevertheless, of a fairly good grade. It is understood that No. 43 Vickers, a few locations south, will also be finished with a minimum penetration in an effort to eliminate the necessity of passing through the water zone. If these shallow wells prove commercially productive, it will permit the drilling of additional shallow producers between present deep producers. The Associated Oil Co., in addition to this experimental work, is cleaning out No. 14 Vickers in the northern part of the property, a west offset to No. 1 Brown of the Brown-Moor Oil Co. It will be put on the beam at 2,256 feet, but the best that can be expected is small production.

The Petroleum Securities Co. cleaned out No. 10 Cone, an offset to the Shell's No. 7 Rindge, and returned it to production pumping 186 bbls. from 2,576 feet. The Shell, by the way, has never succeeded in overcoming water trouble in No. 13 Rindge, a diagonal offset to No. 10 Cone of the Petroleum Securities, and it begins to look as though the difficulty is due to the encroachment of edgewater. The Shell has two other apparent edge wells in No. 10 Rindge at 2,350 feet and No. 14 at 2,348 feet. The former is pumping 50 bbls. of oil and 250 bbls. of water, while the latter is making 60 bbls. of oil and 200 bbls. of water. Oscar Howard, who has been operating in the extreme western part of the field, is convinced that there is no deep production on his Dominguez lease, and he is accordingly suspending work at 4,900 feet pending a final decision to abandon. The Mohawk Oil Co.'s No. 5 Machado, north of Howard's property, did not show up as well as was expected. It showed considerable water on a production test made early this week and the company is plugging back from 3,235 feet to 3,140 feet. The Standard has indicated its intention of starting work on five new wells in this area and the company will undoubtedly continue to run five or six strings of tools during the winter months, as it has considerable undeveloped acreage. Four of the projected drillers, Nos. 34, 35, 36 and 37, are on Los Angeles Investment Lease No. 1, while the other, No. 20, is on Vickers Lease No. 1. Rigs for all five are in course of construction. The Standard reports increased showings in No. 3 Stocker at 1,737 feet and indictaions are favorable for commercial production. The completion of this hole will prove up several new locations in the eastern part of Los Angeles Investment Lease No. 1 and possibly the southern part of the Pacific Oil Co.'s Baldwin lease. The southern part of the latter property, by the way, has improved considerably during the past month and it would not be at all surprising if the Pacific is successful in finishing at least 10 more wells in this section. They may, of course, be only comparatively small pumpers, but will, nevertheless, be commercially productive. Work was started during the early part of the week on the derrick for P. M. Culley's wildcat, which is just across the municipal boundaries of the city of Inglewood. This is the first wildcat inside the city limits of Inglewood and, although two previous applications to drill in the exclusive residential east side were refused, no opposition has developed to Culley's new work to the north.

Huntington Beach

The Standard's well No. 38 on Lease B at Huntington Beach proved something of a surprise early this week when it came in flowing 697 bbls. of 23.6 gravity oil cutting 1 per cent. The well was finished at 4,400 feet and, while a good producer was anticipated, the outcome was much larger than expected. Recent completions on this property have been quite favorable and the company is undertaking still further work. There are at present three drillers on Lease B and rigs going up for two more. The company is also starting some new development work on the Bolsa Chica lease, having staked a location for No. 24 and started rig construction for No. 23. The Southern California Drilling Co. is still experiencing considerable trouble in getting its No. 1 Granas under way and, although strenuous efforts have been made for the better part of two weeks, the well is still incomplete. It begins to look as though the company will be obliged to go after a deeper sand.

Work has slowed up considerably during the past several months in the Torrance Field and, with the exception of the Standard and Chanslor-Canfield Midway Oil Co., very little drilling is being done. The former is working on one well, while the latter is running three strings of tools and has four new rigs erected for use when necessary. No. 3 Seward of the California Petroleum Co. at Rideout Heights was finished during the early part of the week pumping 88 bbls. daily from 1,340 feet. The well was finished with an 8¼-inch oil string carrying 550 feet of 60 mesh screen and drilled into production in less than a month at an estimated cost not to exceed $30,000. The completion of this well brings the company's aggregate production in this area to around 200 bbls. a day. The Pan American is still held up with water trouble in its No. 1 Jesurum, a deep well drilled to 4,713 feet.

The Julian Petroleum Co. has filed abandonment notice on both No. 1 Hartley and No. 1 Fairview farms at Newport and salvage work is already under way. The cement has just been drilled out of No. 4 Mesa and this 628-foot hole will be bailed for a test within the next day or so. W. J. Barnhart and D. R. Morrow, who have been personally operating some of the Julian wells at Santa Fe Springs on a royalty basis, are incorporating under the name of Barnmor Petroleum Corp., which concern will carry on their present activities and start work on a new well at Newport Beach. The company has recently secured a 30-acre lease and it is the present plan to drill a row of offsets to the wells of the Interstate and Rosenburg Co. Cos. The Sunland Oil Co. has finished its No. 1 Mesa at 867 feet and preparations are being made to put it on a pumping test, with a good chance of securing a 25 or 30-bbl. well. No. 1 Waterman of the Marine Oil Corp., east of Costa Mesa, is going ahead steadily at 3,300 feet and, while the company will give out no data on the formation, it is reported to be in a hard sand. The South Basin Oil Co., in the northern end of the field, resumed pumping a day or two ago, but it could not be learned just what plans have been made for distribution of the crude produced.

Richfield

The Standard is getting some slight showings in No. 20 on Kramer Lease No. 2 at Richfield, but at 3,845 feet they were not deemed of sufficient importance to warrant a test, and drilling was resumed. A twistoff at 5,315 feet left 1,760 feet of 3-inch drill pipe in No. 1 Tuffree of the Union Oil Co., a deep-sand well in the eastern part of the Richfield district, and some little delay will be occasioned pending recovery. The Chiksan Oil Co. has spudded in No. 1 Robinson, just west of Richfield, and the hole will be carried down for a deep test. The California Petroleum Co. is also starting some new work in this area, the company's latest spud being No. 18 Yarnell. In addition to this well the company has another well drilling in proven territory, No. 10 Richfield Consolidated at 4,318 feet. The Mutual Oil Co. is erecting rig for an offset to No. 1 Kramer of the Wonder Oil Co. and drilling will probably get under way within the next two weeks. The Mutual Oil Co. has subleased from the Wonder company, but will restrict its operations to the development of the deep sand.

No. 3 Fisher of the Shell Oil Co. at Fullerton, a recent completion, averaged 1,800 bbls. daily during the past week, and the steadiness of the flow indicates that it will not drop off very soon. No. 10 Orange, the Shell's latest drilling operation, is going ahead at 465 feet in a sandy shale. The Brea Canyon Oil Co., Birch & Fullerton all made fairly good progress during the week. The Union, however, is still held up in both of its Olinda wildcats with mechanical trouble. The Chanalor-Canfield Midway Oil Co. is also being delayed because of mechanical trouble in No. 96 Olinda at 5,202 feet. The Birch-Royer well at Coyote did not get a water shut off, as preliminary tests indicated, and it is the intention of the company now to core ahead a little farther.

Midway-Sunset

No. 7 of the Midland Oilfields Co. in Section 32-12-23, out in the Maricopa Flats, is the deepest of any headed down for the Obispo sand and, barring mechanical trouble, will probably be the first to reach its goal. The Associated Oil Co.'s test in the same section is showing oil and gas at 3,548 feet and it, too, has some distance to go. The United Oil Co. was going along very nicely until water trouble developed at 3,615 feet and it is accordingly being delayed until an effective water shut off is secured. The California Petroleum Co. in Section 32-12-23 is drilling ahead in a brown shale at 3,255 feet and reports the formation as conducive to rapid drilling. The El Dora Oil Co. cemented its No. 8 at 3,462 feet and has hopes of effecting a complete shut off on the 8¼-inch landed at 3,425 feet. The General Petroleum Co.'s No. 10 is also standing cemented, but drilling will probably be resumed within the next few days.

The Federal Drilling Co. has just completed its No. 11 in Section 19-31-24 in the Midway district of the field and a 4¾-inch oil string is at present being run in. The Honolulu Consolidated Oil Co. finished a couple of small pumpers in Section 4-32-24, No. 43 being good for 102 bbls. from 3,163 feet, while No. 44 made 85 bbls. from 2,969 feet. The United Oil Co. finished a 335-bbl. flowing well when its No. 1 Calidon in Section 19-31-23 was put on production. The test was made from 2,952 feet. The Kendon Petroleum Co. is resuming operations on its well No. 3 in the Hovey Hills area in Section 35-32-23, after a suspension of six months. The Belridge Oil Co. has also started a little shallow drilling, its No. 1 Goynier bein gspudded in recently.

The Gross Drilling Co.'s well No. 2 in Section 26-30-24 furnished Elk Hills operators with a little excitement last week by staging a short blowout. The hole had been finished at 3,634 feet and was being tubed when a slight mishap occurred. The tubing parted and, while the crew was fishing for it, the well got away and painted the derrick with clean oil. The fishing tools have since been recovered and the well should be on steady production within the next few days. The Interstate Oil Co.'s well in Section 23-30-24 is still dry at 4,900 feet, the formation continuing as a hard gray sand. The United Oil Co.'s test in the same section is also dry and, since it is now at 4,965 feet, very little hope is held out for completion.

The General Petroleum Co. was re-

(Continued on Page 105)

Rocky Mountain Area

By Frank B. Taylor

Since the start of the shipping of crude from the LaBarge Field in southwestern Wyoming the past week, considerable activity has been noticeable in the field work. There are six rigs drilling at present. All these are drilling for the shallow sands except that of the Transcontinental Oil Co., which is testing the deeper pays.

Five cars of crude were sent from Susie, on the Oregon Short Line Railroad to the Utah Oil & Refining Co.'s plant at Salt Lake, as the first shipment of crude from the LaBarge Field. This crude was brought from the field by trucks.

After a long and bitter fight, the highway officials of Colorado have agreed to use asphalt in the building of roads in that State. Colorado has a measure that provides that only home manufactured products should be used on its highway building, when same can be secured in the State.

Mountain Producers Oil Co. announced a raise of its quarterly dividend of 10 cents. This makes the total dividend 60 cents for this last quarter of the year or $2.40 for the annual dividend. The Salt Creek Consolidated Oil Co. also announced a quarterly dividend of 15 cents per share.

Sunburst Field Producer

The Sunburst Field in Montana brought in another big well on the east side of the field the past week. The Rose Oil Co. on Section 31-35-1 drilled into the pay at 1,470 feet and the well is estimated at 1,500 bbls. This production is thought to be coming from a stray sand below the Sunburst sand, but above the Ellis sand. This well still has to drill to the Ellis sand which is expected at about 1,550 feet.

The Dakota Montana Oil Co. drilled in a good well on Section 30-35-1, also in the east side of the field, and this well found two stray sands between the Sunburst sand and the present bottom of the hole at 1,440 feet. This well went into the Ellis sand and is thought to be producing from three separate sands at present. It is estimated good for 100 bbls.

The Homestake Exploration Co.'s No. 2 on the State Section 36-35-2 is located in the southeast part of the main field and found a stray sand with production at 1,320 feet, then drilled on to the Ellis sand, bottoming the hole at 1,470 feet. The well made flows naturally and is estimated good for 1,000 bbls.

The Illinois Pipe Line Co. is placing new collecting lines in Sunburst and also a new pumping unit at the Sunburst pump station to take care of the increased production the field is making. The cold weather of that part of the country necessitates extra pumping equipment in the winter to shove the oil through the lines and the Illinois is giving the operators the best of service in this regard and making provision so as to prevent any shut down of the wells on account of the cold freezing the pipe lines.

Sunburst Field is just under the Canadian boundary and the thermometer often reaches 60 below in the field during cold winters. At this low temperature it is almost impossible to keep lines from freezing and the oil from congealing, but this winter, the field will be better prepared than ever before to ship its crude with a minimum of trouble.

Trouble at Pilot Butte

The well at Pilot Butte that found oil in the Muddy or Dakota sand is in bad shape and the Bureau of Mines men have objected to its being drilled in in its present shape. An effort was made to pump the well, but as the tubing fitted the small hole closely and as there was only about a half inch between the casing and the tubing, the tubing soon filled with sand and had to be pulled. The well was pumped about an hour altogether while the tubing and rods were in place and delivered about 30 bbls. in that time.

This well at 2,700 feet found a sand

(Continued on Page 120)

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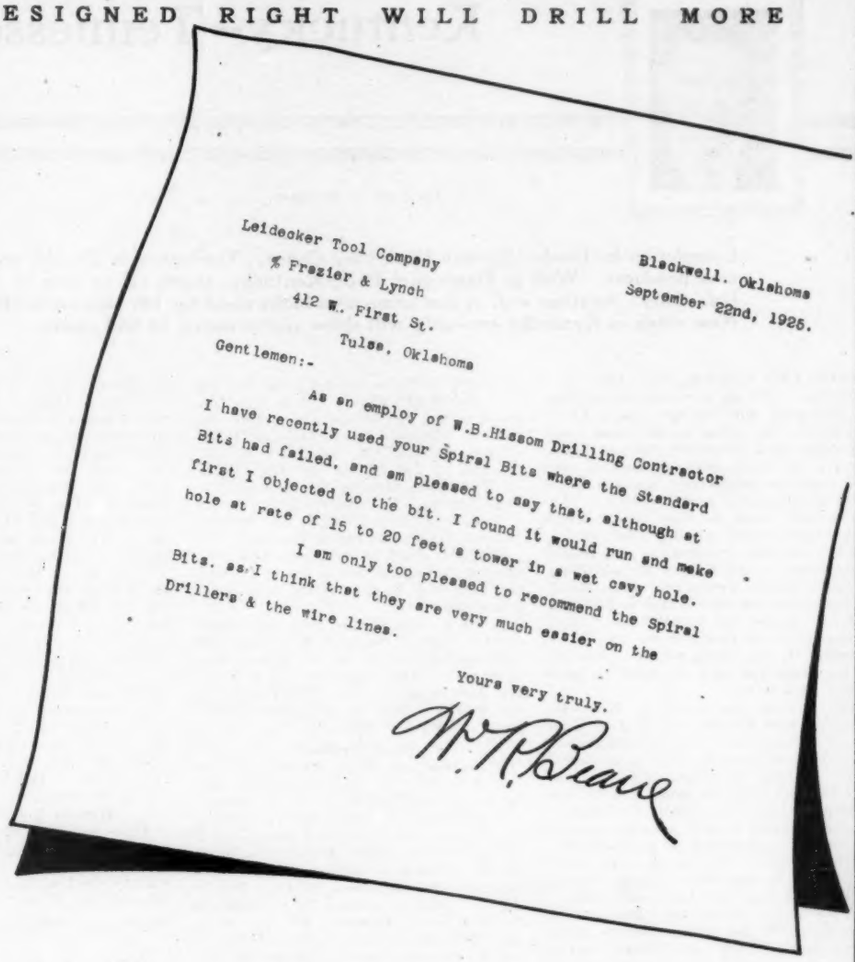

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Kentucky—Tennessee

By Vern T. Whitney

Completion in Tinsley Bottom Pool, Clay County, Tennessee, is 250-bbl. natural producer. Well in Davenport Pool, Kentucky, starts off at rate of 30 bbls. daily. Another well in that same area looks good for 100 bbls. naturally. New work in Kentucky probably will show slump owing to bad roads.

BOWLING GREEN, Ky., Dec. 7.—From now until the new year, operations in Kentucky will be practically at a standstill. The roads in this area from December until the latter part of March are for the most part impassable, and rigs cannot be moved onto locations without a great deal of extra expense.

The past week in these fields shows nothing out of the ordinary aside from a 250-bbl. natural producer on the Hamp Lynn tract, in the Tinsley Bottom Field of Clay County, Tennessee. It is No. 7 on that farm and was drilled to 467 feet, 150 feet below the Pencil Cave. This makes the sixth producer for the Dafoe interests on the Lynn, which is proving to be about the only outstanding lease in the pool so far.

The banner completion in Kentucky was the New Domain Oil & Gas Co.'s No. 9 Bessie Snell, in the Davenport Pool, Warren County. This well started off at 30 bbls. flush from a total depth of 1,168 feet. In the same vicinity, the Golden Fluid Oil Co., under the management of Herbert Teague, struck a shallow gusher on the Manning farm in the Mississippian lime. The worth of this well is not yet known, but it appears to be good for at least 100 bbls. naturally.

A wildcat drilled by Diamont & Thompson on the Alonzo Rogers place, 1 mile south of the recent Veach well of the Leeper Oil Co., in Daviess County, is dry and plugged in the Barlow formation at 824 feet. The shallow Jett sand had a fair showing of oil, but not good enough to be given a shot.

Week's Development Work

A review of the result of the week's operations, compared with last week, shows the following: The same number of completions, 5 less oil wells, a decrease of 146 bbls. in initial yield, 3 more dusters and 2 additional gas wells. The wells were distributed by counties as follows:

County—	Comp.	Wells	Prod.	Dry	Gas
Barren	8	8	63	0	0
Owensboro district	3	2	16	1	0
Warren	3	3	43	0	0
Morgan	3	0	0	3	0
Lawrence-Johnson	4	1	10	1	2
Floyd	2	0	0	0	2
Allen	1	1	5	0	0
Wayne	1	0	0	1	0
Clay, Tennessee	4	2	253	2	0
Morgan, Tennesse	2	2	8	0	0
Total	31	19	398	8	4
Last week	31	24	544	5	2
Difference	0	5	146	2	2

Western Division

Barren County, Cumberland County and the Owensboro district, comprising parts of Hancock, Ohio and Daviess Counties, are the only fields where there is, at present, any considerable amount of new work. Of these the Owensboro district leads in interest on account of tests going down outside of the proven areas.

A mile and a half south of Antwerp Church, the Foster Oil Co. is drilling at 400 feet. The Petroleum Extraction Co. struck a showing of oil at 465 feet on its Maude Stevens tract, one-half mile south of Morgan, and 4 miles south of the nearest producer, after having drilled through a light showing of oil and considerable gas in a shallower sand. Perry E. Tichenor, of Evansville, is drilling two wildcats, one near Taffy in Ohio County, and the other near Zion in Henderson County.

That the recent strike on the Metcalf lease, in Ohio County, is believed to open promising territory is shown by the fact that the White Plains Oil & Gas Co., which drilled the Metcalf, is drilling two wells on adjoining leases, while the Pennsylvania-Indiana Oil Syndicate is progressing at 250 feet in its trial on the W. P. Griffith farm in the same section.

The Indiana Pipe Line Corp. is building a 5-mile extension from Collier Station, Daviess County, to reach this pool.

One mile south of the Veach well, Diamont & Thompson got a duster in both the Jett and Barlow sands, and abandoned the test.

In the Collier Station Pool, the Leeper Oil Co. finished No. 4 J. S. Collier, 800 feet east of No. 1, for 10 bbls. in the Jett sand. This same concern's No. 4 Ira Jett, south of No. 2 McBrayer, in the Pellville Pool, is producing 6 bbls. from the Barlow formation.

Other Drilling

Thompson and others have a rig over No. 2 Gabbert, at Pellville, which will be drilled to offset No. 3 J. O. Brown; Pearl Steven's No. 1 G. Barlow, drilling at 250 feet; Carson's No. 6 Abe Howe is being spudded; White & Nicklin's No. 7 O. T. Burdette is drilling on top of the Barlow; Panther Creek Oil Co.'s No. 10 J. W. Smith, drilling in; Pirtle & Smith's No. 2 Howard, 400 feet north and the same distance west of No. 1, which was abandoned, is being started; Foster Oil Co.'s No. 1 R. B. Powers was going ahead at 412 feet; Chicago Petroleum Syndicate's No. 4 Ira Crowe is spudding at 52 feet.

Ohio Looking Over Field

The Ohio Oil Co., a subsidiary of the Standard, has had a corps of geologists in the Owensboro Field for the past several weeks. It is not known whether this concern has taken up any leases or not, but it is the opinion of the oil men that the Ohio at least has an anxious eye on the field.

The McBride Oil Co. has a representative in the field looking over prospects, and possibly taking up some leases.

Barren County Wells

Although the week was dull in Barren County, twice as many completions are reported from this section as from any other county in the State. Eight wells were finished with initial production ranging from 2 to 25 bbls.

The Beaver Creek Pool, north of the Hall Baker, again is credited with the best completion. It is the Consolidated Gas Co.'s No. 7 Duff, estimated at 25 bbls. from a pay at 140 feet below the black shale.

In the Hall Baker area, the Wood Oil Co.'s No. 3 Mary E. Church is making 6 bbls. from the deep pay at 160 feet below the shale.

The Emery-Moore area showed six producers: Lewis Emery, Jr., & Sons' No. 4 Fannie Preston, good for 8 bbls. at 487 feet, 185 feet below the shale; Helper & Gorby's No. 4 Chamberlin is a 3-bbl. pumper at 350 feet; Byron B. Rice's No. 2 Jackman, at Oil City, is a 2-bbl. stripper at 350 feet; Ziegler Brothers' No. 22 Taylor Mansfield started off with 7 bbls. from the sand at 185 feet below the shale; Houchins Leasehold Co.'s No. 18 Pitcock is making 5 bbls. on the power at 432 feet, and Porter and associates' No. 12 McGlocklin showed for 7 bbls. from the shallow depth of 340 feet.

Ziegler Brothers, Scott & Hice's No. 4 Bradford, drilling at 320 feet; Star Oil Co.'s No. 5 Russell, drilling at 260 feet. Salt water was found in the amber sand 20 feet above the shale; D. W. Wilson's No. 1 Brown is in the black shale; Keyes Oil Corp.'s No. 2 Jump, drilling at 548 feet; same concern's No. 1 B. Rogers, going ahead at 302 feet; Fred Moore is spudding his No. 11 fee; R. B. Tyler's No. 1 White was in the second sand at 260 feet; unknown parties are rigging up to drill on the Marshall tract, adjoining the White; Harrington & Norris Brothers' No. 12 R. E. Evans was down 100 feet; Consolidated Gas Co.'s No. 12 A. Depp, drilling at 102 feet; No. 8 H. W. Duff, drilling at 204 feet; Wood Oil Co.'s No. 11 W. M. Church, making headway at 492 feet; Hiland Oil Co.'s No. 11 Cassidy, progressing at 132 feet; L. Emery, Jr., & Sons' No. 2 Depp and Greer 36 acres, drilling at 300 feet; Porter and others' No. 13 McGlocklin, rigging up; Gorby's No. 1 Bales is without a showing in the deep pay.

Warren and Allen Counties

Three tests that are being watched with interest in Warren County are C. P. Taneyhill's Worden well, D. T. Bolling's trial on the Duncan, and L. F. Hays' venture on the Keller tract. The first two are attempts to extend the production of the McLemore-Gillispie-Price Pool to the west and southwest. Taneyhill's test has been delayed on account of a bad fishing job. However, it has passed through the first pay below the shale, which was given a shot without much results, while Bolling is drilling into the first pay. The best production in the Gillispie Pool is found in the second pay, and both these ventures will be carried through the latter horizon. The Keller well, in advance of the Lowe wells in the northeast extension area of the Davenport Pool, has also met with misfortune. At 600 feet, the tools were lost, and it now looks as though the hole will be abandoned and a new one started a few feet away.

In Warren County the New Domain Oil & Gas Co. brought in a 30-bbl. starter in its No. 9 Bessie Snell at a total depth of 1,168 feet. The shale was from 959 to 1,053 feet and the sand from 1,128 to 1,148 feet, which was treated to an 80-quart shot. This lease, located in the Glen Lily section of the Davenport Pool, adjoins the Wilson property of the Onsel-Harnahan Oil Co. Across the Barren River from the Davenport lease of Sheridan & Co., Wilson and associates got a 3-bbl. stripper in No. 2 H. Jenkins in the shallow sand.

The Essex Petroleum Corp. scored a 10-bbl. starter in its No. 7 Smith, 400 feet north of No. 3, in the Gillispie Pool, southwest of Bowling Green, at 1,187 feet. The shale was topped at 1,037 feet and drilled through at 1,117 feet. The pay was from 1,168 to 1,178 feet.

W. K. "Pinky" White is credited with the only completion recorded in Allen County. It is his No. 2 Meador, 12 miles southwest of Scottsville, reported good for 5 bbls. at 368 feet, immediately below the shale.

Eastern Division

Four gas wells, one producer and five dry holes, all of which were of wildcat nature, is the record of the past week in the eastern end of the Blue Grass State.

In Morgan County, the test made by

(Continued on Page 98)

Fields of the Central West

By Whit

FINDLAY, O., Dec. 5.—Bad weather conditions prevailed during the week in review in all divisions of the Central West Field, north of the Ohio River, hence few completions were recorded. This is the season of the year when the average oil operator puts his producing properties in shape for the winter, after which the holidays will be spent with family or friends. Florida has had the call recently, as some of the operators figure that they may be able to land onto something worth while and make expenses for the trip to the Sunny South.

Lima Field

Eleven completions are reported for the week in the old Lima Field of northwestern Ohio, the best of which was drilled by Slagel & Johnston in No. 3, southeast corner of the J. Plieman farm, northeast quarter of Section 21, with 40 bbls., a very good well for the new extension to the south of the old-time Trenton Rock Field. In the same township, Lee A. Watson's test, southwest corner of the J. Barhorst No. 2 farm, southeast quarter of Section 27, is credited with 5 bbls. The Fort Laramie Oil & Gas Co.'s test in the southeast corner of the J. Moyer farm, in the northwest quarter of Section 29, produced 150,000 feet of gas. Top sand at 1,233 feet and drilled 33 feet in. All the above wells are in Cynthian Township, Shelby County, and it is evident that when active work is resumed in the early spring, some excellent production will be found, not alone in this county, but others to the south.

In Jerusalem Township, Lucas County, the Ohio Oil Co.'s No. 18, 750 feet from the south line and 970 feet from the east line of the R. H. and M. A. Eck farm, Section 33, pumped 8 bbls. Top of sand at 1,323 feet and drilled 82 feet in. The early spring will naturally bring about some new work on the south shore of Lake Erie, in both Oregon and Jerusalem Townships.

In Jefferson Township, Mercer County, the June Oil Co.'s wildcat, northeast corner of the A. & A. Metzner farm, northwest quarter of Section 34, is credited with 10 bbls., with top of Trenton at 1,100 feet and oil at 50 feet in.

In Madison Township, Sandusky County, the Paul Oil Co.'s second test, 250 feet from the north line and 1,200 feet from the west line of the C. P. Paul farm, Section 15, pumped 10 bbls. and has a nice volume of natural gas. Top of sand at 1,210 feet and drilled 25 feet in.

In Moulton Township, Auglaize County, the Boston-Southwestern Oil & Gas Co.'s test, 1,000 feet from the north line and 1,320 feet from the east line of the C. and D. Carr farm, southeast quarter of Section 23, pumped but 1 bbl., but it is believed there is something of larger proportion close by. Top of Trenton at 1,178 feet and drilled 17 feet in the sand.

In Bath Township, Allen County, C. A. Peavey and others' No. 3, in the southeast corner of the S. H. Vore farm, Section 12, pumped 5 bbls. Sand was topped at 1,320 feet and drilled 30 feet in.

In Troy Township, Wood County, George W. Hoffman made a nice strike in his No. 7, 600 feet from the south line and 1,000 from the west line of the William and Henry Hartman farm, Section 12. The well produced 30 bbls. with top of sand at 1,229 feet and drilled 75 feet in. In Middleton Township,

(Continued on Page 102)

Shafts are heated and shrunk on gudgeons before riveting.

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FOR many years we have tried to make Moore Steel Wheels as nearly everlasting as it is humanly possible to make them. And we must have succeeded pretty well—the great demand shows that. For instance, in the Smackover field, perhaps the greatest oil strike ever witnessed in the history of petroleum, there are as many Moore Wheels in use as of all other makes of steel wheels combined.

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MOORE STEEL WHEELS

Pennsylvania-West Virginia

By D. S. Wakenight

Gas well estimated at 14,000,000 feet in Logan County, West Virginia. Pure Oil Co. gets 110-bbl. well in Licking County, Ohio, and several other good wells were completed in the same territory. Deep sand tests in Guernsey County, Ohio, are below 4,000 feet.

PITTSBURGH, Pa., Dec. 7.—The result of development work during the past week was the completion of a number of fair oil producers and gas wells. As usual, the gas wells outnumbered the oil wells. Nearly all the gassers are located in the West Virginia fields. More wells were completed than in the preceding week but the volume of new production somewhat less. There is no marked activity in any part of the Eastern Field and the work under way located for the most part in defined territory. In some localities, development work has been suspended for the winter months. This can be revived only with a sharp advance in the market. Operators could be induced to return if the market was high enough to warrant drilling for light pumpers.

The only undeveloped territory that looks at all promising is the new Big Injun sand development in Henry district, Clay County, West Virginia. The average size of the wells is not large but the cost to drill to the producing formation is not large.

Some Fair Producers

Located in Section 1, Hopewell Township, Licking County, the Pure Oil Co. completed and shot in the Clinton sand a second test on the A. O. Michael farm. The well produced 110 bbls. the ensuing 24 hours. In the southeast quarter of Section 24, Ward Township, Hocking County, the Kachelmacher Estate completed and shot in the Clinton sand No. 19 on the James J. Tracey Estate. After a shot it responded with a production of 80 bbls. the first 24 hours. In the southwest quarter of Section 12, Washington Township, the Rauber Oil Co. completed a test on the W. H. & Gertrude Rauber farm. The well is good for 500,000 feet of gas and a showing of oil.

In Lot 7, Hanover Township, Licking County, the Edward H. Everett Co. completed and shot in the Clinton sand No. 9 Felix Claypool. It produced 75 bbls. the first 24 hours. In the east half of Section 17, Prairie Township, Holmes County, the East Ohio Gas Co.'s No. 4 W. F. Kendall is a gasser in the Clinton sand, good for 2,000,000 feet.

Morgan County

Morgan County presents five fair producers. In the southeast quarter of Section 28, York Township, the Pure Oil Co.'s No. 8 on the William Epply farm produced 25 bbls. after completed and shot in the Berea grit. In the northeast quarter of Section 33, the same company completed and shot in the same formation No. 6 on the Isaac Smith farm. The well produced 25 bbls. the first 18 hours thereafter. In the northwest quarter of same section and township, the same company's No. 4 on the R. E. Hughes farm is good for 20 bbls. a day in the Berea grit. The Sun Oil Co.'s No. 12 on the C. E. Swytzer farm, in the southwest quarter of Section 26. The well produced 40 bbls. the first 24 hours after a shot in the Berea grit. In the northwest quarter of Section 32, same township and county, the Pure Oil Co.'s No. 11 on the Ira N. Baringer farm is good for 20 bbls. a day in the same formation. In the northeast quarter of Section 18, Prairie Township, Holmes County, the Pure Oil Co.'s second test on the Margaret Miller farm produced 25 bbls. the first 24 hours after a shot in the Clinton sand.

Meigs County

In the southeast quarter of Section 19, Sutton Township, Meigs County, Meigs & Summers have completed in the Berea grit a test on the Eli Davis farm. It is good for 5 or 6 bbls. day. In the southwest quarter of the same township, L. Goldish and others have completed a test on the Grant Gossett farm. The first 36 hours after the well was drilled in the show of oil was very light and it would not pay to operate. They are contemplating abandoning it.

Light Pumper in Deep Territory

In the deep sand territory in Section 19, Green Township, Hocking County, Ohio, the Hocking Valley Drilling Co. completed and shot the Clinton sand in No. 3 Edward Miller. It is good for 10 bbls. a day at a depth of 3,187 feet. In Lot 10, Lafayette district, Medina County, the Ohio Fuel Gas Co. completed a test on the R. O. Wheeler farm. It is a gasser good for 638,000 feet in the Clinton sand.

Drilling Deep Test

In Section 9, Knox Township, Guernsey County, the Ohio Fuel Gas Co. is down 4,321 feet at a test on the Robert Nelson, Jr., farm. In Adams Township, the same company is drilling tests on the C. M. Donley and A. C. Sunnafrank farm and has made a location on the Annie M. Jirles farm. In Union Township, Muskingum County, the Eastern Carbon Black Co. has drilled to a depth of 4,321 feet at a test on the Charles Burris farm and shut down. In Adams Township, Sroltz and others are drilling at 2,940 feet on the L. W. Unterzumber farm. In Burks Township, Tuscarawas County, the Logan Gas Co. is drilling at 4,000 feet on the E. P. Miser farm.

In Section 14, Monroe Township, Perry County, in the old Corning Field, Marshall & Marshall have completed in the Berea grit No. 29 on the Donohue farm, which is good for 3 bbls. a day. In Franklin Township, Licking County, W. W. & A. T. Wehrle have completed a second test on the Louis Evans farm. It is not good for more than 1 bbl. a day. In Section 4, Madison Township, the Ohio Fuel Supply Co.'s No. 5 on the Charles Kiger farm is a gasser in the Berea grit.

Washington County

Washington County has quite a number of completions. In Section 14, Liberty Township, Helman and others have completed in the Maxon sand a test on the Farley heirs' farm. It is a 2-bbl. pumper. In Newport Township, F. E. Lawrence has a duster in the first Cow Run sand at a test on the Charles Thomas farm. In the Rinards Mills district, the Carter Oil Co. has a duster in the Squaw sand at No. 5 on the Nancy Tice farm. In Lot 49, Belpre Township, Brown & Walker have a duster in the first Cow Run sand at No. 3 on the Walker heirs' farm. No. 4 on the same farm is a very light pumper in the first Cow Run sand.

In the southwest quarter of Section 21, Jackson Township, Knox County, the Arkansas Fuel Oil Co.'s No. 13 on the L. V. Dugan farm is good for 4 bbls. a day in the Berea grit. Davis, Maxwell & Co. have a dry hole in the Berea grit at a test on the Jonas King farm, Section 29, Knox Township, Columbiana County. In the southwest quarter of Section 20, Reading Township, Perry County, the Planet Oil Co.'s test on the David Petty farm, formerly reported a duster, has been shot and reported good for 4 bbls. a day.

In Lot 11, Monroe Township, Holmes County, the Arkansas Fuel Oil Co. has drilled into the Clinton sand a test on the William Miller farm. It is good for 4,000,000 feet and showing a little oil. In Section 5, Paint Township, the same company's test on the Isaac V. Miller farm, a wildcat located in the northeast corner of Holmes County, is good for 2,000,000 feet in the same formation.

Duster in Fairfield County

In the northeast quarter of Section 17, Rush Creek Township, Fairfield County, the Carter Oil Co.'s test on the David Ruff farm is a duster in the Clinton sand. In the old Corning Field, Section 33, Pleasant Township, Perry County, the Allegheny Oil Co. has completed in the Berea grit No. 23 on the Thomas and Mary Monahan farm. It is a very light pumper. Inside of West Rushville Corporation, Fairfield County, the Baker Oil & Gas Co. has started to drill a test on the Russell Baker lot.

In Section 34, Alexander Township, Athens County, J. H. Harmon has started to drill a test on the C. P. Riley 120 acres. About five years ago a well was drilled on this farm and a good show of oil developed in the Berea grit. It was ruined as a producer by giving it too heavy a shot. South of Albany, same county, unidentified parties have started to drill a Clinton sand test. Parkersburg, W. Va., parties have secured a franchise to pipe and furnish gas to the village of Albany. The gas to supply the town will be taken from shallow wells near Hebbronsville.

Southeastern Ohio

The southeastern Ohio fields completed small wells. In Section 35, Olive Township, Noble County, the Herds Oil & Gas Co.'s No. 3 on the H. H. Williams farm is a light pumper in the 500-foot sand. In the Firsher Pool, Alexander Township, Athens County, C. H. Beasley & Co. have a 4-bbl. pumper at No. 8 on the W. D. Whaley farm. In the southeast quarter of Section 6, Enoch Township, Noble County, the Cain & Devoll Oil Co.'s No. 10 on the L. E. Devoll farm is a duster in the Buell Run sand.

In Lot 74, Athens Township, Athens County, Bickel & Co.'s No. 3 on the George C. Lawson farm is a duster in the Berea grit. In the southeast quarter of Section 24, White Township, Coshocton County, Central Ohio Gas Co. has a Berea grit duster at a test on the Edward Henderson farm. In Section 17, Adams Township, Guernsey County, the Ohio Fuel Gas Co. has a fair gasser in the Niagara lime at 3,335 feet, on the H. W. Hatten farm.

In Section 37, Adams Township, Washington County, Burk Brothers and others have a duster in the Macksburg 500-foot sand at a test on the Frank Henneger farm. In Section 31, Aurelius Township, Beeson & Athey's No. 10 on the Hupp-Murray farm is dry in the same formation. In Jefferson Township, Noble County, Charles T. Schnider & Co. have a 4-bbl. pumper at a second test on the Alex Bettinger farm.

West Virginia Has a Good Well

On Meadow Run, Grant district, Ritchie County, the South Penn Oil Co. completed in the Big Injun sand a test on the Clyde Atkinson farm. The well is a natural producer and placed 50 bbls. to its credit the first 24 hours. In Lafayette district, Pleasants County, the Botton Oil Co. has a show of a 12-bbl. pumper at No. 5 on the Thornton Wagner farm.

Located in Union district, Tyler County, the Reno Oil Co. has completed in the salt sand No. 5 on Rachel Hissam farm and is a natural producer good for 40 bbls. a day.

On Silver Run, Grant district, Ritchie County, H. P. McGinnis has completed and shot in the salt sand his test on the P. M. McGinnis farm. It is not good for more than 2 bbls. a day. In Union district, the Pittsburgh & West Virginia Gas Co.'s test on the Everett Sheets farm is a gasser in the Big Injun sand. In Grant district, E. E. Pope has completed a test on the W. H. Vincent farm, located on Bonds Creek and good for 2 bbls. a day.

On Joes Creek, Sherman district, Boone County, the Pure Oil Co. completed in the Berea grit No. 17 on the Lafollette, Robson & Pritchard tract. It is the lightest producer ever completed on this tract. It is good for less than 1 bbl. a day. In Union district, Ritchie County, the Carnegie Natural Gas Co.'s test on the A. V. Summers farm is through the Gordon sand and dry. In the same district, Hackett & Co. have the rig completed for a test on the Phoebe Williams farm.

In Grant district, Ritchie County, H. E. McGinnis has a light pumper in the Big Injun sand at a test on the H. E. McGinnis farm. In the same district, the Carnegie Natural Gas Co. has a gasser in the same formation at a test on the Abraham Middleton farm.

Pleasants County

In Grant district, Pleasants County, Morgan & Coen's No. 9 on the Hammett heirs' farm is a light pumper in the Gas sand. In Lafayette district, David French has a gasser in the Squaw sand at a test on the John Jameson farm. In Union district, Tyler County, the Williams Oil Co. has drilled down its No. 2 on the Ada V. Parker farm and showing very light in the Big Injun sand. In southwest district, Doddridge County, F. M. Young's second test on the W. R. Brown farm is very light.

In Smithfield district, Roane County, the United Fuel Gas Co. has completed in the Big Injun sand a test on the G. W. Sarver farm. The Hope Natural Gas Co. is testing for gas in the Maxon sand on the M. J. Duffield farm in Washington district, Calhoun County. In Lee district, Calhoun County, McIntosh & Scott have a gasser in the same formation at a test on the John Riddle farm.

In West Union district, Doddridge County, the Murphy Oil Co.'s No. 6 on the Wilmer Rollins farm is a gasser in the Big Injun sand. In Union district, Ritchie County, the Pittsburgh & West Virginia Gas Co. completed a test on the E. L. Campbell farm. It is a gasser in the Big Injun sand. In Clay district, the Hope Natural Gas Co. has a Big Injun sand gasser on the C. F. Broadwater farm. In Lafayette district, Pleasants County, Coon & Morgan have a gasser in the Big Injun sand at No. 12 on the Bennett heirs' farm. In Walker district, Wood County, Jonas & Parks have a duster in the Big Injun sand at a test on the Ewings heirs' farm.

Test Wells Drilling and Starting

In Ten-Mile district, Harrison County, the Clarksburg Light & Heat Co. is due in the Gordon sand on the T. S. Morris farm. The same company is drilling a test on the A. J. Sheets farm. In the same district, the Furner Oil Co. has started to drill on the A. J. Sheets farm. In Elk district, the Grasselli Chemical Co. is drilling at 4,280 feet at No. 4 on the L. E. Bond farm. In Liberty district, Marshall County, the Manufacturers Light & Heat Co. has started to drill

(Continued on Page 96)

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No other packing manufacturer has made such a thorough investigation of the packing requirements of the modern refinery and gasoline plant as has the United States Rubber Company. There is not a condition from the handling of crude in the pipe line to the various pumps carrying gasoline, kerosene and hot oils, down to hot tar, that is not being packed successfully and economically with "U.S." Packing—sheet, gasket and pump. Refinery service records show that "U.S." Packings *do* make a difference.

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MEN KNOWN IN OILDOM

John D. Clark

John D. Clark of Chicago, vice president of the Standard Oil Company of Indiana and vice president of the Midwest Refining Company, entered the oil business from a law office at Cheyenne, Wyo., and stills calls that his home, as he lived there until 1919, when he joined the forces of the Midwest Refining Company at Denver.

Mr. Clark is a native of Colorado; received his early education in the public schools of Cheyenne; was graduated from the University of Nebraska in 1905, and received a law degree from Columbia University in 1907.

Thereafter he practiced law at Cheyenne, and was active in business and political affairs of Wyoming until requested to take charge of the legal department of the Midwest Refining Company. Subsequently, he assumed the duties of executive vice president of that company, and in the spring of 1923, following the acquisition of control of the Midwest Refining Company by the Standard Oil Company of Indiana, he was elected a director of the larger organization and became vice president and assistant to the chairman of the board of directors.

PERSONAL PARAGRAPHS

H. P. Shoptaugh, of the Star Drilling Machine Company, is in western Kentucky mingling with the trade.

* * *

Al F. Hays of Greensburg, Ind., is in the Warren County, Kentucky, Field where he is drilling a test well.

* * *

Percy Dafoe, in charge of the Dafoe properties in Clay County, Tennessee, is in Bowling Green for the week-end.

* * *

Christie N. Payne, New York, solicitor for the Peoples Natural Gas Company, was a Pittsburgh visitor last week.

* * *

Walter R. Wheat, president of the United States Royalties Company, has returned to Los Angeles from a trip to Cuba.

* * *

D. T. Bolling, independent operator, has returned to Bowling Green, Ky., after spending two weeks in Owensboro, Ky., Field.

* * *

Dan Collins, of the General Petroleum's land, tax and insurance department, was married to Miss Evangeline Benny two weeks ago.

* * *

William Loftus, Los Angeles, left recently for El Paso on a short inspection trip to the wildcat which he is drilling east of that city.

Geologist L. V. Fees of the Continental Oil Company was in Casper, Wyo., the past week on business. Mr. Fees' home is in Denver.

* * *

Early Deane, operator and driller in many fields and expert amateur photographer, is now making his headquarters in San Antonio, Tex.

* * *

L. F. Champion, who has been in the employ of the Pacific Oil Company for a number of years, has just been appointed chief engineer.

* * *

Allen T. Towl, New York, vice president and general manager of the Southern Group of Pipe Lines, was a Pittsburgh visitor last week.

* * *

J. M. Lowman, Kentucky operator, is in Cleveland, Ohio, and announces that he is the proud father of a baby girl. Mrs. Lowman is doing nicely.

* * *

W. P. Simmons, of E. M. Treat & Company, with offices at Bowling Green, Ky., has returned after spending several weeks in the Mid-Continent fields.

* * *

E. R. Wyant, Kentucky manager for the Inter Cities Oil Company, with headquarters at Scottsville, Ky., is in Springfield, Ohio, in the interest of his company.

* * *

E. W. Macklin, assistant superintendent of the Eureka Pipe Line Company, with headquarters at Parkersburg, W. Va., spent several days in Pittsburgh this week.

* * *

J. R. McCaldin of Shreveport, La., who has been operating in Louisiana and Arkansas, has opened an office in San Antonio, Tex., and will make that his headquarters.

* * *

E. H. Johnson, of Knoxville, Tenn., has just returned from a trip to the Sunbright Field in Morgan County, Tenn., and reports quite a bit of progress in that section.

* * *

Fred H. Smith, manager of the refinery department of the Houston Oil Company, located at Camden, Ark., was a business visitor at the general offices of the company in Houston.

* * *

C. B. Craig, manager of branches for the Bessemer Gas Engine Company, left Los Angeles last week for South America where he will spend some time in the interests of his company.

* * *

Joseph McDonald, president of the West Side Gas Company, is expected to return to his office in Taft, Calif., early in December from Scotland, where he has been spending a vacation.

* * *

G. C. Garrett, superintendent of the New England Oil & Refining Company in Venezuela, has been visiting in the California fields renewing old acquaintances before leaving again for Venezuela.

* * *

W. H. Graham, president of the Graham Petroleum Company, who has been quite ill for several months, is able once more to get down to the office in the Pershing Square Building in Los Angeles.

* * *

W. H. Gaither, district manager in the Southwest for the National Transit Pump & Machine Company, of Oil City, Pa., has returned to his Houston, Tex., office after a trip to Dallas and Fort Worth.

* * *

J. C. Wadsworth, a well-known coastal contractor and rotary driller, is in the northern part of Mexico looking over that region for a syndicate which expects to do some development work there if conditions are favorable.

* * *

Harry McLaughlin, general superintendent for the Municipal Gas Company of Dallas, Tex., has been in Houston in consultation with other natural gas men respecting the proposal to pipe the city for natural gas for domestic use.

* * *

C. W. Beckett, formerly an operator and driller of Wyoming and now engaged in the business in the Sunburst Field in Montana, was a Casper, Wyo., visitor. Mr. Beckett and his brother, J. W. Beckett, are doing well in Sunburst and have a producing lease there besides running several strings of tools.

Mr. and Mrs. Roy Wyland will leave Casper, Wyo., in the near future and make their home in New Wales, Fla. Mr. Wyland has long been connected with the banking interests of Casper and also has been interested in the development of the oil industry in that State.

* * *

Harry Powell has resigned as district agent for the National Supply Company of Texas to take charge of producing properties in the North Texas Fields. He is succeeded by Earl Odell, who is located at Fort Worth. Mr. Powell was with the National Company for 19 years.

* * *

President E. H. Steiger, of the New York Oil Company, reached Casper, Wyo., from his home in Oshkosh., Wis., the past week for a business conference with the New York officials. The New York Oil Company is now sending Sand Draw gas through all its lines to Casper and Glenrock, Wyo.

* * *

Paul Applin, well-known petroleum geologist, who has been with the Rio Bravo Oil Company for several years, severed his connections with that concern on December 1 to take up similar duties with the Chesapeake Oil Company, of which J. S. Cosden is the active head. Applin will have headquarters at the Texas offices of the Chesapeake Company in Fort Worth, Tex.

* * *

O. W. Powell, superintendent for the Sinclair Pipe Line Company in Texas, located at Fort Worth, and Frank J. McGovern, district foreman from Mexia to Houston, drove over the line to Houston during the week. Mr. McGovern, a former resident of Oil City, Pa., recently returned from Battle Creek, Mich., where he spent six weeks as a patient, and has fully recovered his health.

* * *

J. Edgar Pew, president of the Sun Oil Company, Dallas headquarters, has been looking over conditions in the coastal region, where the Sun Company is one of the pioneer operating companies, the work being directed from the Beaumont office. M. B. Sweeney, formerly at Beaumont, is now located in Dallas as assistant to Mr. Pew. Both men date their entry into Texas back to the boom days at Spindletop 24 years ago.

* * *

Lewis H. Thornton of Wellsville, N. Y., president of the New York State Oil Producers' Association, is a guest of the Hotel Mayo in Tulsa. Mr. Thornton is a producer in the Allegany Field in New York and in the Cherokee Shallow Field in Oklahoma and is much interested in the compressed air method of producing oil in the latter named territory. He is in Oklahoma for the purpose of studying the method at close hand.

* * *

Col. A. E. Humphreys, who opened the Mexia and Wortham Fields, is in Houston, Tex., coming there from Denver, where he lives. Julius Fohs, the geologist who has "doped" out numerous important structures for the Humphreys interests, is also in Houston. The Humphreys Corporation maintains offices in Houston and has been leasing acreage in the coastal region, but thus far it has done no active drilling. Like most of the other corporations, it requires that all lands must pass the geophysical tests before they are leased.

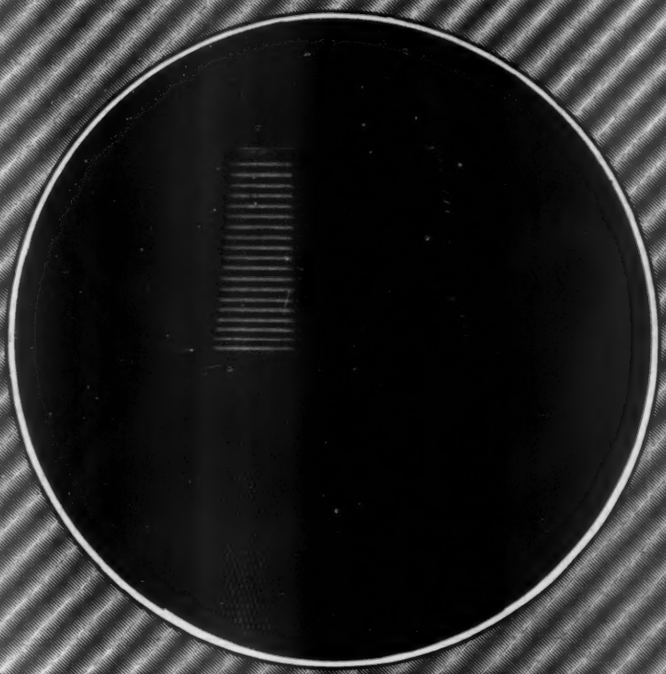
* * *

W. J. Wharton, an independent oil operator of Parkersburg, W. Va., is in Fort Worth, Tex., from which point he is making a survey of the north and west Texas oil territory. Mr. Wharton has been operating for years in West Virginia, Kentucky and Ohio. He expressed himself as well pleased with the outlook in western Texas. He was particularly impressed with the grade of oil that is being produced in this territory. He will be in Texas until just before the holidays.

* * *

H. W. Platenberg, newly appointed general sales manager for the Axelson Machine Company of Los Angeles, is spending a few days in Tulsa winding up his personal affairs preparatory to moving to Los Angeles for permanent residence. Before leaving for the coast he will make an extended survey of the oil fields and will visit St. Louis and Pittsburgh. He expects to arrive in Los Angeles approximately February 1. Mr. Platenberg succeeded Charles Wagner who resigned to become general manager of the newly organized Emsco Derrick & Equipment Company.

"many operators will use no other"



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Branch Plants
Los Angeles, Calif.
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MAIN OFFICE AND PLANT
HOUSTON, TEXAS

Export Office
New York City, N.Y.

NATURAL GAS DEVELOPMENTS

R. R. Commission of Texas Adheres to Its Carbon Black Policy

AUSTIN, Tex., Dec. 6.—Numerous protests are reaching the Oil and Gas Conservation Bureau against granting of permits for four carbon black plants in Stephens County for burning natural gas, Chief Supervisor H. E. Bell, announced. Other telegrams are urging the action.

Judge Bell announced in line with the policy of the Railroad Commission, if it is found the residue gas from casinghead gasoline plants can be used for domestic or industrial purposes, then the permits will be denied, but that permits would be granted only if it is shown that the gas would otherwise be wasted and become a total loss.

"The Railroad Commission has repeatedly and unqualifiedly gone on record against manufacturing carbon black from gas coming from gas wells. The public can be assured they will steadfastly continue to adhere to this well established policy.

"But the issue now before the commission is an entirely different question. Vast quantities of gas are produced in oil wells along with the oil, and coming from the oil sands. This is a necessary incident to the production of oil. Casinghead gasoline plants extract the gasoline from this gas, and blow the residue gas into the air. The only way to keep this residue gas from becoming a total loss to the State and to its owners, is for the pipe lines to take it, or for the Railroad Commission to permit the owners to use it in the manufacture of carbon black. Up to this time the pipe lines have not been able to take all of it. They now promise an increase of pipe line capacity.

"Before acting on any carbon black permit, the commission is making a careful survey of the facts. If this residue gas can be handled by the pipe lines for domestic or industrial use, it should go for that purpose. If there is much more of this residue casinghead gas than the pipe lines can take at present or in the near future then it would be better to make carbon black of it than to let it blow into the air as a complete loss.

"If the commission grants any of the carbon black permits now being requested, it will do so for no other purpose than to prevent its being blown into the air and becoming a total and permanent loss."

SCHEMES NOT PRACTICAL

The views of the gas industry of England, which consumes 18,000,000 tons of coal a year, has been put before the Coal Commission by D. Milne Watson, Governor of the Gas Light & Coke Co., who gave evidence on behalf of the National Gas Council. Mr. Watson said emphatically that the gas industry was satisfied, after very thorough investigation, that at the present time none of the schemes of low-temperature carbonization is commercially practicable. All the evidence the commission has so far heard in regard to low-temperature carbonization has been substantially to the same effect, and it would appear to be established already that the development of this process offers no early prospect of benefit to the coal industry.

GAS ASSURED WINNFIELD, LA.

WINNFIELD, La., Dec. 8.—A franchise acceptable to both the city of Winnfield and to a company represented by D. C. Boyd, which proposes to pipe natural gas to Winnfield from connection with the Southern Gas Co.'s line, 20 miles west of town, is assured following a conference here.

TEXAS BOASTS OF 20 NATURAL GAS FIELDS, SOME OF LARGE CAPACITY

Texas boasts 20 gas fields, less than a dozen of them of large capacity. South Texas, whence Houston expects to get its natural gas supply, numbers nine proven gas fields. Only four of these are known to be large fields with wells that will deliver natural gas in sufficient volume to supply a large domestic and industrial section like Houston, says the Houston Chronicle.

South Texas has something like 30 big gas wells with a total combined open flow of around 900,000,000 cubic feet. Ten of these big wells were drilled by the Houston Oil Co., one by Smith and others, two by the Pratt-Hewitt combination, six by the Caroline-Texas, four by the Morgan Gibler interests and around a half dozen in the Cole-Bruni Field of Webb County by the Cole people.

Total open flow of the wells drilled by the Houston Oil Co. approximates 400,000,000 cubic feet; total combined open flow of wells drilled by others, but contracted to sell the gas output to the Houston Oil Co., runs around 250,000,000 cubic feet. Total combined open flow of all others and contracted by the Border Gas Co., of Laredo and the Southern Natural Gas Co., of San Antonio, is placed at 300,000,000 cubic feet.

The Refugio Field

Much has been said about the La Rosa gas field in northern Refugio County. Here are the facts: Wells drilled, 19; failures, 14; completed producers, 5; combined total open flow capacity, by individual wells: Houston Oil Co.'s No. 1 Rooke, 84,000,000 feet; No. 1 W. J. Heard, 43,000,000 feet; Smith and others' No. 1 Heard, 54,000,000 feet; Pratt-Hewett's No. 4 Heard, 34,000,000 feet; No. 6, 34,000,000 feet (estimated); total, 249,000,000 feet.

All of the above five wells except No. 4 Pratt-Hewett, were tested by the gas investigators recently touring the fields. No. 4 Pratt-Hewett never has been opened for open flow gauge because the valve was broken off when the well was completed. Hole was finished of small size with perforated pipe set in the 2,400-foot sand. This was several years ago. It has since supplied the town of Refugio with natural gas, and for which no money has yet been collected.

Taken as a whole, no gas field in South Texas has as poor a record for completed wells as the Refugio Field. Only 5 wells out of the 19 completed holes were gas producers, and one of these is considered to be in bad shape, in that it blew in before the casing was cemented on or above the 2,400-foot gas sand. This condition makes it possible for the gas to escape up to the water sands above, and eventually, when the gas pressure subsides, let the water filter down to where it may flood the 2,400-foot gas pay. This may never occur, yet it is an ever-present menace in any oil or gas field.

Another Menace

Another menace in the Refugio Field is that 10 of the 19 completed holes have run wild and wasted 5,000,000,000, possibly more, feet of gas, a major portion of this huge volume coming from the prolific 2,400-foot sand. Nine of these wild wells were lost and only three of them finally finished and none too well finished at that.

The No. 1 Rooke and the No. 1 W. J. Heard, recently completed by the Houston Oil Co., are the only wells ever completed in the Refugio Field without experiencing from one to seven blowouts. Some of the wild wells blew for 60 days. The Smith and others well was a wild gasser last summer, wasting 50,000,000 feet of gas daily for 39 days. Taken as a whole, no other field in south Texas has equaled the Refugio Field for poor control of wells and the large amount of gas dissipated in the air. Of the last 10 wells completed in this field during the past few months, 7 have proved failures.

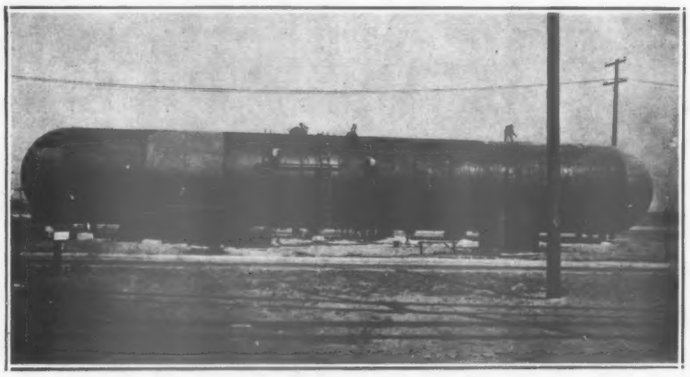
The Refugio Oil & Gas Co. has scored five failures in the last five holes drilled. There were blowouts, the Nos. 1 and 2 Lambert and No. 1 Thomas Heard. The Shelly well tested salt water and the Mitchell well, south of the town of Refugio, is a dry hole. Most disturbing of all is the indication that the Refugio Field is not nearly so large as has been believed, nor is the water level much below some of the wells' bottoms.

The Field Sketched

The reason for this is clear. A check-up on wells actually drilled shows that No. 1 Rooke encountered the 2,400-foot gas horizon at 2,370 feet with bottom of hole at 2,392 feet, demonstrating this to be the highest well in the field and most likely indicating this to be the center of the structure. Four other wells at all four points of the compass from this well were failures and appear to either be off or low on the structure, thus: North, something like a mile, the Shelly No. 1 is a water well; south, a like distance, No. 1 Rooke tested water, although it may prove a producer when plugged back and the shallow sand tested; to the west, less than a mile, the Pratt-Hewett combine drilled three dry holes, all apparently off structure; 6,000 feet east the No. 1 W. J. Heard of the Houston Oil Co., 40 feet lower on structure than same company's No. 1 Rooke, and still farther east than the No. 1 Mitchell of the Refugio Oil & Gas Co., was a dry hole. These failures therefore are indicative of the limits of the field, unless it proves to be a narrow strip either northeast-southwest or southeast-northwest.

At present 20,000,000 cubic feet of gas is daily being piped from this field and from the two gas wells drilled by the Houston Oil Co. Roundly 8,000,000 cubic feet is going to San Antonio and 12,000,000 cubic feet to the Texas Gulf Sulphur plant at Gulf, Texas, through the lines of the Houston Pipe Line Co.

BLIMP TYPE RESERVOIRS AS GAS CONTAINERS



One of the latest type natural gas reservoirs.

LOS ANGELES, Cal., Dec. 4.—For storage and distribution of natural gas to the public, the Southern Counties Gas Co. is constructing 27 large, horizontal "blimp" type reservoirs in Orange County, California.

The illustration shows the first tank of this type as it is nearing completion at Balboa, Cal. Workmen are calking the rivets, which is essential, as this tank is riveted throughout and designed to operate under a pressure of approximately 45 pounds. The tank is 20 feet by 100 feet in dimensions, having a rated capacity of 104,000 feet of gas. The tanks are built by the Western Steel & Pipe Co.

By means of special patented devices the gas is handled under various pressures in the one tank. Pressure at the intake is around 45 pounds per square inch as the gas is pumped into the reservoir. The gas leaves the tank for distribution to the nearby town at 5 pounds per square inch pressure.

The 27 "blimps," of which this is the first installation, will be painted aluminum.

The Southern Counties Gas Co. receives its supply of natural gas from the numerous oil fields in and around Orange County. The natural gasoline plants of Huntington, Brea, Richfield, Olinda, Santa Fe Springs, etc., deliver their residue gas direct into the company's lines.

OWNERSHIP CAMPAIGN

CHATHAM, Ont., Dec. 5.—C. J. Yorath, president of the Canadian Western Natural Gas, Light, Heat & Power Co., Ltd., of Calgary, has launched another customer-ownership campaign. This campaign is along the same lines as the one held in November, 1924, when 2,000 preference shares were purchased by customers and employes in the territory served by the company.

Approximately 100 employes in all these divisions will work in the campaign. Each employe will call on 20 prospective investors to explain the principles of customer ownership and the advantages of becoming a partner in the company by purchasing its preference shares. A letter will be mailed to over 13,000 customers of the organization giving details of the security. Each of the employes' 20 prospective buyers will receive a special folder giving information concerning the investment.

GAS AT LONGVIEW, TEX.

LONG VIEW, Tex., Dec. 8.—Longview was illuminated by natural gas for the first time when the gas was turned on at the gas station, 1 miles out of town. The chamber of commerce, city commissioners and the public witnessed the spectacle.

All of the city mains are not finished on account of the wet weather, but Longview people will soon be burning gas from the Waskom Field.

1—Up a 15% grade, digging at the rate of 10 lineal feet per minute. Boom holds to line and grade.

Notice what an easy job the operator has, in spite of the grade and the high digging speed.

2—Some more 10 foot per minute digging on a Texas pipe line job. Even at this high digging speed the Barber-Greene is easy to hold to line.

Tear this out and send for the paper "The Use of Small Trenching Machines," delivered by A. G. Ford of the Western United Gas & Electric Light Co., before the 21st convention of the Illinois Gas Assn.

Name .....

Address .....

City .....

State .....

3—This overload release sprocket guards the Barber-Greene from the shocks of hitting underground obstructions and makes the machine as careful as human hands in digging around buried pipe. It functions absolutely automatically.

4—Here's a picture showing why the Barber - Greene made good in Texas. Cutting through Texas Gumbo and dodging telephone poles at the same time.

5—A close-up of the Barber-Greene slipping past a pole. Notice the hard lumps that have been dug and notice how close to the pole the machine can be worked.

Here's How and Why the Barber-Greene Made Good in Texas

From July 1st to December 31st, 1924, a Barber-Greene Ditcher dug 38,524 lineal feet of ditch for a Houston public service company. Here is that company's statement of the per lineal foot costs for the work.

Repairs	1.914c
Operation	2.688c
Overhead	2.724c
Total per lineal foot cost	7.33c

Comparing these figures with those previously established by hand labor has led this company to estimate that this single Barber-Greene earned a profit of $4,880.99 for the six months.

There in facts and figures are the reasons why Barber-Greenes are replacing even hand labor on digging jobs all over the country.

The ditching foreman will tell you a different story of why and how the Barber-Greene makes good. He'll tell you of the vertical boom that digs straight down and eliminates all hand labor on such work as service laterals. He'll tell you how it digs faster and holds to grade.

He'll tell you about the overload release sprocket that makes the Barber-Greene as careful as human hands in its digging. He'll tell you about the full length crawlers that hold the Barber-Greene to line and permit it to cross soft spots and ditches without fill-ins or planking.

Or he may sum up the Barber-Greene, as a Florida trenching foreman did, like this, "It's the diggendest thing I ever saw."

We've put a coupon in the upper right hand corner to help you learn more about the diggendest ditcher, and about how it lowers digging costs and boosts digging profits. Sending it incurs no obligation, so, make use of it.

BARBER-GREENE COMPANY—*Representatives in 50 cities*—600 West Park Avenue, Aurora, Ill.

BARBER GREENE

Portable Belt Conveyors Self Feeding Bucket Loaders

Coal Loaders . . . . . Automatic Ditch Diggers . . . Coal Feeders

EQUIPMENT AND SUPPLIES

White Co. Reclaims Crank Case Oil With DeLaval Oil Purifier

Reclaiming crank case oil is becoming an important factor in economy for all companies using large numbers of internal combustion engines, and has a direct effect upon the oil business. The De Laval Centrifugal Review, house organ of the De Laval Separator Co., publishes an account of the saving in lubricating oil effected by the White Truck Co.

A De Laval Oil Purifier plays an important part in one of the final operations in building White motors.

Upon completion, each White motor is run a period of several hours as a test and to eliminate the initial stiffness which is characteristic of any new machine. Proper lubrication during this running-in period is more vital than at any other time during the life of the motor. Until two years ago the White Co. used 13 or 14 bbls. of lubricating oil a week in engines taking the running test. In the absence of a positive means of purifying the oil after this test, it had to be thrown away and new oil used for each engine, as in addition to the dirt and other impurities which crank case oil picks up under actual service conditions, test block oil picks up a considerable quantity of metallic particles which adhere to the surfaces of new machines. To attempt to re-use oil containing these particles would mean that more damage would be done the engine during its running-in than during many hours of actual use on the road.

A De Laval oil purifier was installed and now, with the same number or more engines taking the test, the same grade of oil in use and every other material condition unchanged, the oil consumption is a little less than 2 bbls. a week—actually 100 bbls. for the past year. This represents a yearly saving of 600 bbls. of oil as compared with consumption figures prior to the installation of the De Laval. No oil is discarded, the 2 bbls. of new oil put into service each week being required merely to make up for the lubricant which is actually consumed.

With the present system the oil is drained from the crank case of an engine after it has been given its run-in, pumped to a tank, heated to 180 degrees Fahrenheit, then run through the De Laval purifier which centrifuges out all foreign matter. The purified oil then flows by gravity to a storage tank from which it is again pumped to the engine test blocks.

The fact that the White Co. and other leaders in the automotive field consider that the lubricating efficiency of De Laval-purified oil is equal to that of new oil should be all that is needed to convince fleet operators of the wisdom and safety of using the De Laval crank case oil reclaiming outfit to reduce their own lubricating costs.

A VALUABLE BOOKLET

Distillation as a means of producing pure boiler feed make-up water has created such general interest that a booklet on this subject has just run into its fifth edition.

This new edition has been completely revised to cover the latest developments that are effecting particularly satisfactory results in several new central stations and industrial power plants. Many new diagrams are included to show approved layouts for various operating requirements and the conditions under which evaporators can be used advantageously are thoroughly explained. Free copies of this booklet may be obtained by writing to the publishers, The Griscom-Russell Co., 90 West Street, New York.

CONCENTRATION IN BOILERS

The Andrews-Bradshaw Co., of Pittsburgh, Pa., has reprinted in booklet form a paper entitled, "Concentration in Boilers," which was read by Grant D. Bradshaw before the Engineering Society of Western Pennsylvania.

The booklet is very instructive and emphasizes the growing importance of a greater knowledge of concentration in boilers owing to modern operating conditions. It points out the development of analyzing boiler feed and mentions that recent years have witnessed this change because formerly the importance of such treatment was not realized, and the cost of fuel was much less and also because the natural sources of feed-water supply have become more and more contaminated.

The booklet is very well written and should be read by everyone interested in the operation of boilers.

Sheffield Acquires Control Kansas City Bolt & Nut Company

A controlling interest in the Kansas City Bolt & Nut Co. has been acquired by W. L. Allen and through a new corporation called the Sheffield Steel Corporation practically all of the common stock of the former concern has been acquired. The Sheffield Steel Corp. has offered the remaining stockholders of the Bolt & Nut Co. cash and securities in the new corporation in exchange for their old stock.

The Sheffield Steel Corp. has issued $1,250,000 of 7 per cent cumulative preferred stock which has all been sold, and 75,000 shares of common stock with no par value, which has also been sold. The common stock was listed November 2 by the St. Louis Stock Exchange. W. L. Allen, who was president of the Kansas City Bolt & Nut Co., heads the new corporation as president and will have associated with him the following officers: R. L. Gray, vice president; L. L. Middleton, secretary; H. R. Warren, treasurer; Ernest Baxter, sales manager; J. C. Shepherd, assistant sales manager, and J. W. Anderson, assistant sales manager. The directors of the company are H. P. Wright, chairman of the board; J. F. Porter, Ford F. Harvey, Chestler L. Jones, A. L. Gustin, S. A. Mitchell, J. F. Downing and R. L. Gray.

NEBERGALL ROTARY REAMER

A rotary underreamer has been patented by L. E. Nebergall of Denver, Colo., who claims that when this tool is used in connection with a rotary drill collar which is also his patent, it will insure a straight hole, and will drill and underream at the same time.

DUNLOP'S CHANCE INVENTION

Scientific magazines tell how J. D. Dunlop invented the pneumatic rubber tire. His little child, riding in a baby carriage, objected to the bumps of ordinary wheels. So he took rubber tubes, filled them with water and fastened them to the wheels. Later he got the idea of filling the tubes with air instead of water.

From this came the pneumatic tire used on autos and bicycles.

Big services to humanity usually result from attempts to make life happier for a near relative or friend of the inventor. Love—service—is the mother of more inventions than necessity or laziness.—Greenville Piedmont.

WALWORTH SIGMA STEEL RESULT OF HARD TEST

As is well known, the tendency of the times is toward increased working pressures and superheat requirements in power plant installations and increased working temperatures and pressures in oil refinery processes. Walworth Co., having in mind this trend and foreseeing the necessity for fittings and valves of unusual strength, capable of withstanding high temperature requirements, some time back made an exhaustive series of X-ray studies of steel castings at the Watertown Arsenal. The net result of this long period of research work is a new line of steel fittings and valves known by the name "Walworth Sigma." This embraces a line for 250, 400, 600 and 900 pounds working steam pressures at total temperatures of 750 degrees Fahrenheit which conforms to the tentative standards of the American Engineering Standards Committee.

The severe pipe line strains produced by modern high pressure and high temperature service conditions require greater elasticity as well as strength in all units of such pipe line structures. Consequently, in order to demonstrate by actual tests the elasticity and strength of Walworth Sigma Steel, a test was made of a 400-pounds working steam pressure Walworth Sigman steel flange tee as follows:

The fitting was first given a hydrostatic pressure test of 2,500 pounds per square inch, a little over six times the rated working steam pressure, at which pressure it was absolutely tight.

It was then connected to two pieces of 4-inch double extra heavy pipe, supported on 18-foot centers, and loaded with two weights of 3,714 pounds each. The first weight produced a deflection of 2 9/16-inch.

When the weights were removed the structure sprang back a distance of 4 3/16-inch, leaving a total permanent deflection of 22 7/6-inch. The fitting was then removed and again tested perfectly tight at 2,500 pounds hydrostatic pressure.

This remarkable test demonstrates quite conclusively that the design of the fitting was satisfactory; that the casting was sound throughout, containing no injurious interior defects, and that it was properly heat treated.

From the above it will be noted that the actual test indicated a degree of strength and elasticity for Walworth Sigma Steel products which makes possible a new factor of safety in modern power plants, oil refineries, and other installations where requirements are unusually severe.

"Forgsteel" Valve For High Pressure and High Temperatures

The Hydraulic Press Manufacturing Co., of Mount Gilead, Ohio, has introduced an innovation in the high pressure valve field, H-P-M engineers have a record of 50 years' experience in high pressure work. During this time they have designed innumerable seat and disc combinations in the search for a valve that would successfully withstand high pressure and high temperature conditions. They subjected everything offered on the market to prolonged and exacting tests.

Their combined experience is represented in the new "Forgsteel" valve. The "Forgsteel" valve is of the straight way type. This valve is constructed of forged steel. This permits of a valve body of uniform section throughout, doing away with unequal expansion or contraction.

Full opening is provided for the steam flow. The path of this flow is confined to as few angles as is possible with a valve made from a steel forging. This reduces friction losses to the minimum.

The seat disc and stem are of noncorroding acid resisting steel or monel. This wire drawing is eliminated and this valve is tight after cooling, even if it is shut while hot.

The operating man will find the packing space an interesting feature of the "Forgsteel" valve. Ample packing space is provided and the valve can be repacked in five minutes without disturbing operating conditions. The packing nut is of monel metal or a special acid-resisting, noncorroding steel.

The yoke is of steel, an added factor for safety and efficiency. The design of the "Forgsteel" valve provides a stem which is out of the ordinary because of its size. Acme threads assure a real grip and great strength.

The "Forgsteel" valve is designed exclusively for high temperature and high pressure work. It is built to stand up under the most severe service conditions. Operating men in high pressure power plants and operators of oil cracking plants can secure a very interesting descriptive folder by writing The Hydraulic Press Manufacturing Co. at Mount Gilead, Ohio.

BOOKLET ON ALUMINUM PAINT

The Aluminum Co. of America, with headquarters in Pittsburgh, Pa., has issued a booklet entitled "Aluminum Paint" which is a treatise on the physical properties of aluminum paint and its uses in modern industry. The booklet was writeen by Junius D. Edwards, assistant director of research of the Aluminum Co.

With more attention being paid each year to processes destined to eliminate loss by evaporation and other leaks in tankage the problem of paint is of interest to everyone connected with this item of the oil industry.

NEW DUPLEX ROTARY DRILL STEM

The Duplex Rotary Drill Stem illustrated here possesses unusual merit, according to a statement made by the inventor.

It is made in one piece and has forged box ends for lifting purposes. It is coupled by a one-piece tool joint giving two opportunities for uncoupling.

The advantages claimed by the inventor are that it has no fine pitch threads to gall and that in the event of any damage to the joint it can be easily repaired, ample stock being provided. This stem has 25 per cent less threads than the ordinary tool joint, with the additional feature of permitting the drill bit or other tool to be screwed into any of the box ends.

Wire rope reputation isn't attained in a day. Wire rope quality is not a result of chance. BLACK WIRE ROPE quality, uniformity and durability is the product of skill and exacting manufacturing methods—its reputation won by its wonderful performance in every industrial pursuit.

For economy and increased profits, use Black Wire Rope—It pays in the end.

BLACK STEEL AND WIRE COMPANY

Kansas City, Missouri

Seattle Portland San Francisco Los Angeles

Mid-Continent Sales Office
J. E. Sloan, General Sales Manager
Tulsa, Oklahoma
538-539 Kennedy Building. Dial 3-8912.

Hominy Covington Tonkawa Tulsa Davenport, Okla.
Winfield and Russell, Kansas Breckenridge, Texas Houston Fort Worth Best, Texas

BLACK Steel Wire Co BLACK

Laws Relating to Oil and Gas Reservoirs

Alterations By Operator or Nature in Conditions of Production Result in Changes of Numerical Values

By Stanley C. Herold
Petroleum Geologist, Stanford University, California

The preceding five installments of this series dealt with artificial and natural ideal volumetric control reservoirs which produce either liquid only, gas only, or both fluids in combination. Their ideal performance is described by the fundamental primary function formulas of Article 475, and by the corresponding relative curves of Figures 442 and 445. These formulas and curves express the laws of delivery for this class of reservoirs.

From the fundamental formulas we obtained the derived primary function formulas of Article 477. Instead of constructing the curves for these, we suggested the simple expedient of cutting the fundamental curves by vertical lines. (Article 478). We shall now attempt to show that the derived formulas express the laws of theoretic performance for both hydraulic and volumetric control reservoirs. Any alterations which the operator may make in the conditions of production, and any alterations which nature may make in the conditions of production, aside from alterations caused by or accompanying time as a function of delivery, give rise to instantaneous changes in the numerical values of the reservoir functions in strict accordance with the derived laws.

Perhaps we should be reminded once more that the derived laws for reservoirs of capillary control are distinctly at variance with the present ones; therefore our present deductions do not apply to oil and gas wells performing under the control of Jamin Action. (Article 181 et seq).

Diagram for Natural Reservoir

507. In conformity with Article 474 the same pressure diagram which served for hydraulic control, Figure 277, is adopted for the present control. Whereas we formerly specified that the height of the column of liquid must be maintained at the outcrop a, we now say that the free surface of the liquid must lower at a rate directly proportional to the rate of production at W. If the area of the liquid free surface is not absolutely constant as it lowers in the formation, we shall assume, in accordance with Article 473, that the discrepancy between the horizontal and vertical dimensions of the reservoir is sufficiently great to reduce possible variation in the area to an entirely negligible circumstance. We may grant that either this reservoir was formerly of hydraulic control, and that it has altered to volumetric control, for reasons set forth in Article 413, or that it has consistently produced fluid according to the latter control since the incepton of producton.

We again have the 10 pressures of Articles 279 to 289, inclusive, to consider in the present control. The definitions for these remain unchanged. It is to be noted, however, that all pressures whose measurements are shown to lie either entirely or partially above the line N in the figure decline during the course of production as a function of time. We may therefore separate the pressures into two groups, as follows,

a) Those which vary as a function of time:

Symbol	Name
S	Static Pressure
RS	Registered Static Pressure
P	Potential Pressure
IF	Internal Friction Head
EF	External Friction Head
TF	Total Friction Head
R	Residual Pressure

b) Those which do not vary as a function of time:

A	Atmospheric Pressure
C	Constant Back Pressure
RC	Registered Constant Back Pressure.

In Article 285 our attention was drawn to the fact that, should the supply of water at the outcrop be completely shut off, and yet production continue until the end, the pressure head gradually lowers, approaching and finally reaching the point f in the figure. The line N is the potential axis for the pressures which vary with time.

Harmonious Percentage Variation

508. The pressures S and RS of the first group relate, as we have learned, to the absolute and atmospheric axes respectively. Their measurements extend above and below the line N, and their formulas, which express their variation with time, include an additive constant C or RC. The remaining five pressures of this group are measured entirely above the line N. Their formulas expressing variation with time do not include additive constants—they pertain directly to the potential axis. It is to be proved that all five formulas are alike, in that they involve the same function of time.

We accept, for reservoirs of this control, the propriety of Torricelli's Theorem, expressed as follows:

$$P = K_1 V e^2$$

Just as we accept the truth of this relation as a matter of experience, so must we accept another; to-wit,

$$R = K_2 V e^2,$$

for this is the very relation upon which our successful calibration of flow meters depends. (Article 294). By subtraction,

$$P - R = (K_1 - K_2) V e^2$$

But

$$P - R = TF,$$

and the expression in parentheses may be reduced to K, giving us the relation

$$TF = K\ Ve^2;$$

that is, the total friction head varies as the square of the velocity.

There is another relation which we accept in connection with the calibration of flow meters; namely,

$$EF = K_3 Ve^2,$$

which, by subtraction from the preceding formula, gives

$$TF - EF = (K - K_3)\ Ve^2.$$

But

$$TF - EF = IF,$$

and the expression in the parentheses can again be reduced to a simple K; therefore

$$IF = K\ Ve^2$$

Thus for all five pressures, which may be designated in group by F,

$$F = K\ Ve^2.$$

From the fundamental primary function relation,

$$Ve = KT,$$

the following formula may be written:

$$F = K\ T^2;$$

that is, all five pressures vary as the square of time remaining. For potential pressure, the equation merely expresses the relation obtained in Article 417 regarding the time required to empty the type gravity solution tank.

This presentation admittedly depends upon the empirical verification of three formulas. The first one—Torricelli's Theorem—is certainly a postulate which is not deductible from anything more fundamental. Should we seek mathematical proofs for the other formulas, we would necessarily assume the truth of the first one at the beginning of our calculations. All three are equally acceptable from experience alone.

509. If all pressures vary as the square of time, they must vary in direct proportion to each other. When, for example, P has declined to 50 per cent of its original value in the course of production, IF, EF, TF and R, have declined to 50 per cent of their original values—provided the physical condition of the orifice is the same at the particular time as it was in the beginning. It does not matter what changes might have taken place at the orifice in the intervening time.

In Article 293 this principle was termed "Harmonious Percentage Variation."

Accordingly, when P has reached its final value of zero, the four other pressures do likewise; all arrive at zero simultaneously at the instant denoting the end of the life of the reservoir. This agrees with our previously defined potential reservoir, internal and external friction heads, and so on.

Obviously, on account of the additive constants C and RC, the static and registered static pressures do not possess harmonious percentage variation. The significance of this fact was mentioned in Article 310.

Cases in Theoretic Performance

510. The study of theoretic performance in the present control may be based largely upon that in hydraulic control. The three identical cases pertaining to known alterations in the conditions of production from the reservoir will apply here. We deem it unnecessary to repeat the argument previously presented in connection with these cases—rather shall we consider the present discussion a continuation of the former articles dealing with the separate conditions imposed by nature or by man upon the producing reservoir. We have only the additional features presented by volumetric control to account for.

It is in theoretic performance where the two controls appear to function alike. Should this not be so, considering the fact that the reservoirs are physically alike? We say that altered conditions for production are erratically imposed upon such reservoirs—erratically in the sense that they have no reference to the time T as a function of delivery. Now, the behavior of the reservoirs in the time T constitutes the very unique difference between them, and since our derived equations are obtained precisely by eliminattime T as a function of delivery. Now, tal primary function formulas, we should not believe their similar performance a strange coincidence. As we have said before, hydraulic control may be considered a special case of volumetric control. They have been separated, not only for economic reasons, but more particularly for mathematical advantages in presentation.

In brief review, the three cases are as follows:

Case 1. A change in the value of the external friction, brought about by the manipulation of the orifice.

Case 2. A change in the value of the static pressure. We are principally concerned with the apparent change due to the interception of closely adjoining wells.

Case 3. A change in the constant back pressure. This occurs when the line pressure for a gas well is altered, and when the height of the column of liquid in an oil well is altered.

A particular act at the well may involve any two or all three of these cases.

Case 1

511. The table showing the status of pressures is given in Article 291. In this case we find the potential pressure unaltered. There is a quantitative exchange in pressure units between the total friction head and the residual pressure, but after the new conditions for the orifice are once settled, all five pressures F proceed to decline with T in accordance with the principle of harmonious percentage variation. A new potential reservoir has been set up.

The potential pressure-time curve is shown in Figure 511. It is drawn for an increase in the external friction head at the time t. The reservoir began production with a pressure at the point a, and had the physical condition of the orifice remain unchanged the decline curve would have consisted of a single sweep from a to O_1. Although the potential pressure is not affected at the moment of manipulating the orifice, the path described by its decline is thenceforth a different one. This path, like the original one, is parabolic, but it possesses an equation with a different value of parameter p, such that the zero-zero point of the new curve lies at O_2. The point denoting the end of the life of the reservoir is merely shifted to the right or left, according to an increase or a decrease, respectively, in the amount of the external friction head. The position of the X-axis with respect to the absolute axis is not altered in this case.

We may suppose the position of O_1 has been determined by applying the data of two observations, a and r, to the relative curve of Figure 442. Must we repeat the process after the manipulation? This can be done, but another elapse of time is required between observations b and s. Since O_1 is known, it is a simple matter to calculate the position of O_2 from the velocity-time curve. This is one of the advantages of knowing the location of the zero-zero point for the reservoir under any particular set of conditions for production. The curve ab approaches O_1; the fact that it never reaches there does not minimize its mathematical

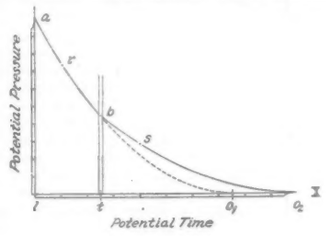


Figure 511

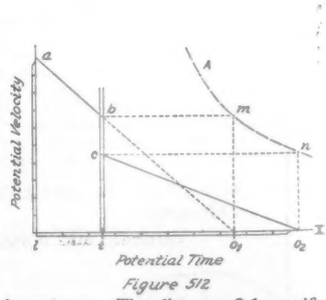


Figure 512

importance. The distance $O_1 1$ specifies a potential or mathematical life for the reservoir which may be adopted as a 100 per cent standard condition for the purpose of calculations.

Velocity-Time Curve for Case 1

512. In Figure 512 we have the velocity-time curve corresponding to the foregoing pressure-time curve. Production

(Continued on Page 90)

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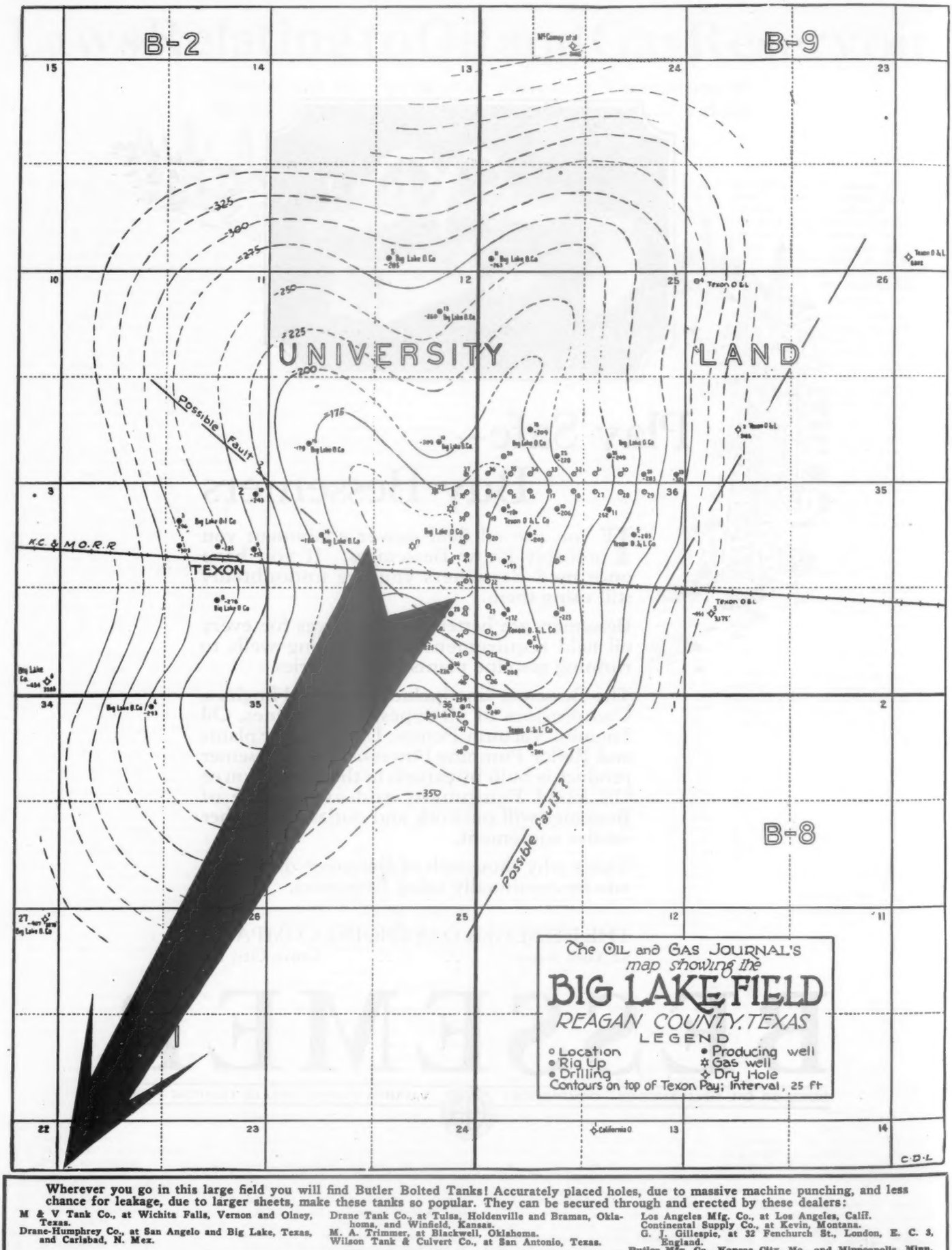

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GASOLINE TANK WAGON PRICES SHOWED UPWARD TREND DEC. 1

For the first time in four months tank wagon prices of gasoline in the United States on December 1 showed an upward trend. Figures compiled by The Oil and Gas Journal, based on prices in 50 representative cities of the country, revealed that the average tank wagon posting on December 1 was 15.703 cents, an increase of .175 cent over the average price on November 1.

While the increase was comparatively slight, nevertheless it indicated a turning point in the general course of tank wagon postings since August 1, when the average price was 19.413 cents, the peak for this year. However, average prices since October 1 have been practically steady, as the decrease on November 1 was only .27 cent and the gain December 1 only .175 cent.

The upward trend in tank wagon prices during November was a direct reflection of the stronger refined markets which have been steadily improving in all parts of the country for the last six weeks. The month was marked by the gradual return of normal tank wagon conditions in nearly all cities where price "wars" had resulted in cut-rate prices during the summer and autumn. This was shown especially in the prices at Omaha, which were advanced 4¼ cents during November, and at Kansas City, which were 2 cents higher December 1 than on November 1.

Outside of Omaha and Kansas City most of the changes were in the territory of the Standard Oil Co. of Louisiana, where prices were advanced 1 cent generally and 1½ cent at Memphis. Only in two of the 50 cities were postings lower December 1 than on November 1, these being Cleveland, Ohio, and Augusta, Maine.

Average Tank Wagon Prices in Fifty Cities, 1925

January 1	13.918
February 1	16.74
March 1	19.06
April 1	18.68
May 1	18.352
June 1	19.122
July 1	19.387
August 1	19.413
September 1	16.703
October 1	15.808
November 1	15.528
December 1	15.703

There being no changes in State gasoline taxes during the month, the average tax in the 50 cities remained 2.3 cents.

The following table shows the tank wagon prices in the 50 cities compiled by The Oil and Gas Journal:

GASOLINE PRICES EFFECTIVE DECEMBER 1, 1925

Table showing gasoline tank wagon prices as of December 1, 1925, exclusive of taxes in 50 representative cities, including the amount and date of changes since November 1, 1925. High and low prices and State taxes also given.

	Prices Nov. 1	November Changes					Chngs. Dec. 1	Prices Dec. 1	High and Low Prices 1924		1923		Taxes Dec.1 1925
Birmingham, Ala.	17.0	....	....	....	....	....	....	17.0	20.0	13.0	20.0	14.0	2.0
Phoenix, Ariz.	20.0	....	....	....	....	....	....	20.0	20.0	16.0	22.5	17.5	3.0
Little Rock, Ark.	13.5	....	....	20 13.5	....	....	....	13.5	18.0	13.0	20.5	12.5	4.0
San Francisco, Cal.	14.0	....	....	....	....	....	....	14.0	15.0	11.0	19.0	12.0	2.0
Denver, Colo.	16.0	....	....	....	....	....	....	16.0	19.0	12.0	20.0	11.0	2.0
Hartford, Conn.	16.0	....	....	....	....	....	....	16.0	20.0	13.0	24.5	15.5	2.0
Dover, Del.	17.0	....	....	....	....	....	....	17.0	20.0	14.0	23.0	14.0	2.0
Jacksonville, Fla.	16.0	....	....	....	....	....	....	16.0	19.0	12.0	20.0	13.0	4.0
Atlanta, Ga.	17.5	....	....	....	....	....	....	17.5	19.0	11.0	22.0	13.0	3.5
Boise, Idaho	20.0	....	....	....	....	....	....	20.0	22.5	18.5	24.0	18.0	3.0
Peoria, Ill.	10.5	....	....	....	....	....	....	10.5	18.2	13.0	20.8	12.2	...
Chicago, Ill.	15.0	....	....	....	....	....	....	15.0	18.0	13.0	20.0	12.0	...
Indianapolis, Ind.	16.2	....	....	....	....	....	....	16.2	18.2	13.2	20.8	12.2	3.0
Des Moines, Iowa.	13.5	....	....	....	....	....	....	13.5	18.5	13.5	21.1	12.5	2.0
Wichita, Kang.	8.8	....	....	....	....	....	....	8.8	17.8	12.8	20.4	11.8	2.0
Louisville, Ky.	17.0	....	....	....	....	....	....	17.0	19.0	12.0	21.0	13.0	3.0
New Orleans, La.	12.5	....	....	20 13.5	....	....	....	13.5	16.5	11.5	19.5	10.5	3.0
Augusta, Me.	18.0	5 16.0	....	....	30 17.0	....	....	17.0	19.0	13.0	24.5	15.5	3.0
Baltimore, Md.	15.0	....	....	....	....	....	....	15.0	19.0	13.0	22.5	15.0	2.0
Springfield, Mass.	16.0	....	....	....	....	....	....	16.0	20.0	13.0	24.5	14.5	...
Detroit, Mich.	16.8	....	....	....	....	....	....	16.8	18.8	13.8	21.8	13.2	2.0
Duluth, Minn.	13.5	....	....	....	....	....	....	13.5	19.2	14.5	21.5	12.9	2.0
Natchez, Miss.	15.5	....	....	....	....	....	....	15.5	18.5	11.5	20.0	12.5	3.0
Kansas City, Mo.	12.9	....	10 14.9	....	....	....	....	14.9	17.9	11.9	19.5	10.9	3.0
Helena, Mont.	21.0	....	....	....	....	....	....	21.0	23.0	18.0	23.5	18.0	2.0
Omaha, Neb.	10.0	....	13 12.25	24 14.25	....	....	....	14.25	18.25	11.0	20.5	12.25	2.0
Reno, Nev.	17.5	....	....	....	....	....	....	17.5	18.5	14.5	22.5	15.5	4.0
Newark, N. J.	15.0	....	....	....	....	....	....	15.0	19.5	13.5	23.5	15.5	...
Albuquerque, N.M.	20.5	....	....	....	....	....	....	20.5	23.0	18.0	25.5	17.0	3.0
New York, N. Y.	17.0	....	....	....	....	....	....	17.0	20.0	14.0	24.5	15.5	...
Charlotte, N. C.	15.0	....	....	....	....	....	....	15.0	19.0	12.0	21.5	15.0	4.0
Fargo, N. D.	18.9	....	....	....	....	....	....	18.9	19.6	14.9	24.3	13.6	1.0
Cleveland, Ohio	17.0	2 16.0	....	....	....	....	....	16.0	20.0	15.0	21.0	16.0	2.0
Tulsa, Okla.	14.0	....	....	24 15.0	27 14.0	15.0	15.0	15.0	18.0	9.5	20.0	8.0	3.0
Portland, Ore.	14.0	....	....	....	....	....	....	14.0	16.0	12.0	20.0	13.0	3.0
Philadelphia, Pa.	17.0	....	....	....	....	....	....	17.0	20.0	14.0	23.0	14.0	...
Providence, R. I.	16.0	....	....	....	....	....	....	16.0	20.0	13.0	24.5	15.5	1.0
Charleston, S. C.	15.0	....	....	....	....	....	....	15.0	19.0	12.5	22.0	15.0	5.0
Huron, S. D.	13.0	....	....	....	....	....	....	13.0	20.0	15.0	22.6	14.0	3.0
Memphis, Tenn.	10.5	....	....	20 12.0	....	....	....	12.0	18.0	12.0	20.0	12.0	3.0
Dallas, Tex.	16.0	....	....	....	....	....	....	16.0	17.0	9.0	19.0	6.0	1.0
Salt Lake City	18.5	....	....	....	....	....	....	18.5	21.5	16.5	22.0	15.5	3.5
Burlington, Vt.	18.0	....	....	....	....	....	....	18.0	20.0	13.0	24.5	15.5	2.0

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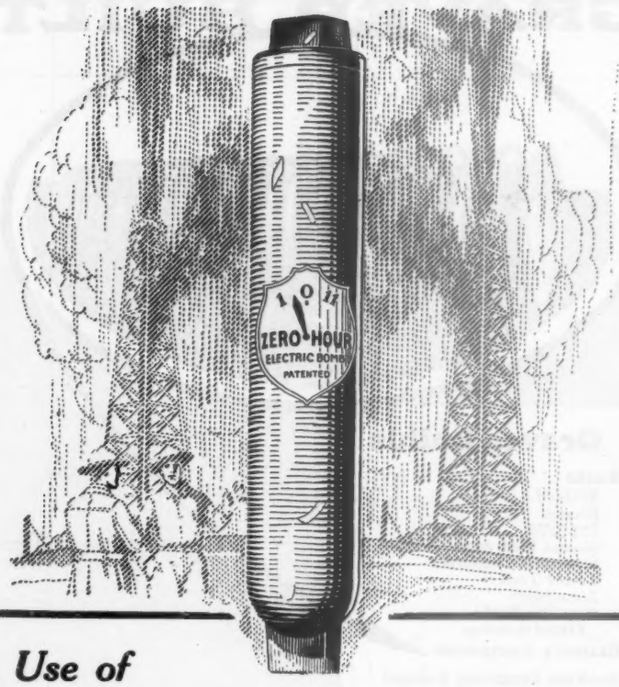

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Phone 774

Norfolk, Va.	15.0	....	....	....	....	....	15.0	19.0	14.5	21.5	15.0	3.0
Washington, D. C.	15.0	....	....	....	....	....	15.0	19.0	14.0	23.0	15.0	2.0
Charleston, W. Va.	15.0	....	....	....	....	....	15.0	19.0	14.0	23.0	15.0	3.5
Milwaukee, Wis.	16.1	....	....	....	....	....	16.1	18.1	13.1	19.6	12.0	2.0
Casper, Wyo.	17.0	....	....	....	....	....	17.0	19.0	14.0	18.0	13.0	2.5
Seattle, Wash.	14.0	....	....	....	....	....	14.0	16.0	12.0	20.0	13.0	2.0
Minneapolis, Minn.	13.2	....	....	....	....	....	13.2	18.9	12.0	....	....	2.0
Average price	15.528	....	....	....	....	....	15.703	18.99	13.27	21.17	13.65	2.3

IMMENSE POTENTIAL PRODUCTION OF OIL IN ATHABASKA TAR SANDS

By Victor Lauriston

CHATHAM, Ont., Dec. 4.—Recent statements by Henry L. Doherty and others relative to the possible exhaustion of the United States oil fields, has stimulated a renewal of interest in the possibilities of the Athabaska tar sands. At the present time Canada imports practically all the crude petroleum and petroleum products used in the country, the proportion of gasoline and other petroleum products refined from Canadian crude being little more than 1 per cent.

Mr. Doherty's suggestion of oil shale, tar sands and coal as possible sources of oil supply is of interest to Canada from the fact that the country is credited by leading geologists with having the greatest known coal deposits in the world, but also the largest tar sand and oil shale deposits.

Some time ago Dr. G. S. Hume of the Geological Survey of Canada declared that these shales and similar deposits may do much in course of time to eliminate dependence on imports from the United States. As to existing conditions, however, Dr. Hume said:

"The production of oil in 1923 in Canada was obtained from wells in New Brunswick, Ontario and Alberta, but was only 1.3 per cent of the total Canadian consumption of crude and refined oil for the same time."

Canada possesses immense potential resources of oil in the tar sands of northern Alberta and the oil shale of the maritime provinces. The tar sands of Alberta occur over an area of 7,500 to 8,000 square miles, some portions of which give 20 per cent bitumen, carrying an oil content as high as 69 per cent. The oil shales of New Brunswick and Nova Scotia will in places produce as much as 30 to 36 imperial gallons of oil to the ton, with some by-products; and an amount of oil shales available is exceedingly large.

While a satisfactory commercial process of extraction has not yet been worked out for either of these types of fuel reserve, chemists and engineers are working on the question, Dr. Hume states, and the technical difficulties in the way of utilization are being made the subject of extensive experimental work and laboratory investigation. That a solution of the problem would shortly be discovered was the hope expressed by the geologist.

Dominion Dependent on Imports

While admitting that an increase is possible in the production of wells, Dr. Hume pointed out that, at present, the consumption is far in excess of the production, and it is not likely that the Dominion will be independent of foreign oil for some time. A further way out exists, however, in the utilization of coal tar products, which is being extended. In this connection Dr. Hume said:

"In Nova Scotia in 1915 the Dominion Iron & Steel Co. began the recovery of benzol and toluol with other products from the coking coal. They were used during the war for the manufacture of explosives, but subsequently they have been combined as a motor fuel, and the mixture was found so successful that production reached 292,000 gallons in 1921.

"It is claimed that this motor fuel possesses qualities which make it superior to the best gasoline (freedom from carbon trouble, peppier action, etc.) and with the establishment of coke ovens elsewhere in Canada, as in Hamilton and Ford, Ont., motor fuel from this source will become increasingly important."

With the emphasis of understatement the Department of the Interior pointed out some time ago that "an extensive deposit of bituminous sand outcrops at frequent intervals along the Athabaska River and certain of its tributaries in the district centering about McMurray in northern Alberta. The area represented by outcrops and presumably underlaid by bituminous sand, extends from 35 to 40 miles east and west, and 100 miles north and south between west longitude 111 degrees and 112 degrees 15 minutes and north latitude 56 degrees, 15 minutes and 58 degrees. Upwards of 250 exposures, all within 60 miles of McMurray and representing parts of one continuous deposit, have been examined and measured. Certain of these outcrops represent portions of a deposit that, under reasonably favorable market and transportation conditions, may eventually prove commercially valuable; but only a limited portion of the area can be considered to be of present economic value, if such controlling factors as thickness and character of overburden, transportation, percentage of associated bitumen and uniformity of material are considered. Each of these factors as well as labor, fuel and water supply should be given careful and detailed study in considering commercial development in McMurray district."

Seepages of Bitumen

Associated with the bituminous sand are occasional small seepages of bitumen, locally known as tar springs. These originate in the richer beds. The official report continues:

"It may be stated that the McMurray deposit represents the largest known occurrence of solid asphaltic material, and that it is as yet totally undeveloped. Practically all asphaltic materials and petroleum products used in Canada are now imported from foreign countries."

Three possible lines along which the bituminous sand may be commercially developed, are suggested in this report as follows:

1. The crude material may be used for the surfacing of streets and highways. In 1925, in order to demonstrate the merits of the material, there were designed and laid in Edmonton, Alberta, areas of standard sheet asphalt, bitulithic and bituminous concrete.

2. The bitumen, which is, as has been mentioned, of a high grade, might be separated from the sand aggregate and utilized for a number of recognized purposes for which such material is well adapted.

3. The crude bituminous sand might be retorted for the recovery of crude petroleum. Such a distillation has been made, using a retort with a charged capacity of 25 pounds crude bituminous sand, and the crude petroleum was fractionally distilled and the various distillates refined. The possibilities of such distillation on a commercial scale have not been determined, but there are strong indications that the associated hydrocarbons can be successfully recovered from the bituminous sand in this manner.

OIL WORKER BADLY HURT

TONKAWA, Okla., Dec. 4.—Wayne Hooks, fireman for the Wents Oil Corp. on the Mahoney farm in the Tonkawa oil field, was injured, probably fatally, when the boiler blew up. The cause of the explosion has not been determined.

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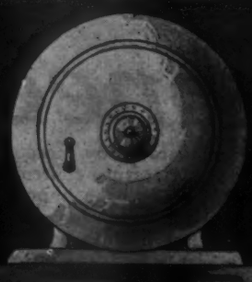

Would you trust your money to a bank that placed it in wooden boxes? You are practically doing that when you risk your money on wooden derricks.

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For years manufacturers strived to produce a temperature controller that could be operated by *mercury*. For it is an acknowledged fact that mercury is the most sensitive, the most accurate and the most durable, when it comes to measuring temperature. That's why nothing has ever replaced mercury for the clinical thermometers upon which human life often depends.

Now we have found a way to operate the time tested, rugged, Honeco Controller by mercury.

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is the only controller operated by mercury.
It makes possible the temperature control of numerous processes in refineries that it has been impossible to handle satisfactorily with gas or vapor tension controllers—especially processes where the bulb is periodically subjected to a temperature considerably in excess of the operating point. No other controller will endure such conditions without injuring its life and accuracy.

The Honeco is adapted for controlling temperatures from minus 40 to plus 900° F., permitting the use of *one* controller for one or a dozen conditions. Furnished with short or long range for operation at any point within this range. Its sensitivity is the same at any point of the range.

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COMMITTEE OF 11 GIVEN VOTE OF CONFIDENCE BY OIL ASSOCIATION

A resolution endorsing the report of the Committee of Eleven to the American Petroleum Institute on the general state of the oil business was passed by the general executive committee of the Mid-Continent Oil & Gas Association at its meeting held last week in Tulsa. The resolution follows:

Whereas, December 19th, 1924, the President of the United States appointed a Federal Oil Conservation Board, consisting of the Secretaries of War, Navy, Interior and Commerce, to study the Government's responsibility with regard to the conservation of oil and to enlist the cooperation of representatives of the oil industry in its investigation; and,

Whereas, On January 13th, 1925, the Board of Directors of the American Petroleum Institute tendered the assistance of the Institute to the Federal Oil Conservation Board and, at the same time, authorized the appointment of a Committee of Eleven representing the Institute to collect the facts and to report its conclusions and recommendations to the Board of Directors of the American Petroleum Institute, all to the end that the efforts of the Institute might be useful to the Federal Oil Conservation Board in the discharge of the duties and responsibilities imposed upon it by the President; and,

Whereas, In pursuance of this resolution, the President of the American Petroleum Institute appointed a Committee of Eleven which, after months of investigation and study, completed and published its report; and,

Whereas, There has been some adverse criticism of such report, largely resulting, as we believe, from a misrepresentation thereof, or from a disposition to ignore the difficulty and total uncertainty of a number of the major problems considered in the report; and,

Whereas, In the letter to the Committee of Eleven, transmitting said report to the Board of Directors of the American Petroleum Institute, the following appears: "Favorable looking lands become oil fields when the drill has revealed the presence of oil and only then. Hence, predictions of future supply of crude oil are necessarily conjectural. Speculative, also, perhaps to a greater degree, must be estimates of future demand, depending as they do upon conditions, which, with the advance of science and invention, may undergo unforeseen and radical changes. Conclusions of the committee are based on the best information obtainable within and without the industry." And,

Whereas, the Committee of Eleven, throughout its report, emphasized the importance of the price factor, taking the ground that a compensatory price will greatly augment the petroleum supply of the country by making available for use the deposits of oil shale, coal and lignite, and by justifying deeper drilling, the use of such processes as flooding with water, introduction of air and gas pressure, and mining for oil; and,

Whereas, The very nature of the subject dealt with and a true interpretation of the facts and conclusions of the Committee of Eleven indicate that the report of such committee was not intended as an absolutely accurate forecast of the crude supply of the country, which would be an impossible thing, but as an expression of the best thought and opinion of the petroleum industry on those matters;

Now, Therefore Be It Resolved by the General Executive Committee of the Mid-Continent Oil & Gas Association, representing the petroleum industry in the States of Kansas, Oklahoma, Texas, Louisiana and Arkansas, as follows:

1. That, as practical men engaged in the various branches of the petroleum industry and having long experience therein, we have a full and definite appreciation of the difficulty and perplexity of the many problems studied by the Committee of Eleven and dealt with in its report to the Board of Directors of the American Petroleum Institute.

2. That the members of said Committee of Eleven are all recognized as outstanding figures in the petroleum industry of America and as competent to consider and deal with the matters treated in their report as any other group of American oil men which might be selected for that purpose, and we hereby declare the utmost confidence in their integrity of purpose as reflected in their report and attribute to them such a high degree of patriotism as would forbid their approaching any department of our Government except in a spirit of fair dealing and candor.

3. That it is our conviction that the membership of the Committee of Eleven manifested the high qualities set forth in the preceding paragraph of this resolution in the study and preparation of the matters set forth in their report.

4. That we believe that whatever adverse criticism which has been made of said report has been due to a misrepresentation thereof, or to a failure to fully grasp and to allow for the great uncertainty and conjectural character of the various subjects dealt with by the committee.

5. That the secretary of this association be directed to transmit to the board of directors of the American Petroleum Institute a duly authenticated copy of this resolution.

UPTON COUNTY WILDCAT IS CENTER OF INTEREST

FORT WORTH, Texas, Dec. 7.—Operators in Upton County are keeping a very close watch on the Union Land Co.'s No. 1 of the Kirby Petroleum Co., 2 miles west of the Baker wildcat of the Republic Production Co. in southwestern Upton County. The well is now drilling at about 2,000 feet and is expected to get the sandy lime formation soon. This well got the salt at 500 feet, considerably higher than it was found in the Baker well and also went out of the salt at a very favorable point.

Drilling is being continued on the Baker well without very much of an increase in production, though the well flowed about 90 bbls. last Tuesday. So far the well has considerably more than 100 feet of sandy lime formation which is said to show oil all the way down. Operators with holdings in that territory are very optimistic, believing that it points the way to a very prolific oil pool somewhere in that section of the county.

The Plateau Oil Co. is building the derrick for its No. 1 on Union Land Co. property in Upton County. The location is in the center of Section 34, Block 1, M. K. & T. Railway survey of Upton County. Drilling is to be started by December 20. The location is on a lease formerly owned by McCamey & Johnston who drilled the Baker well and they retain an interest in the Plateau well.

The Texas Co. is moving in material for derrick and is to start active operations by January 1 on a location in the northwest corner of Section 53, Block 35 of the Union Land Co. holdings in Upton County.

The Independent Oil & Gas Co., practically a new entrant in the Texas oil fields, has secured acreage and has made a location for a well 1,000 feet east of the Baker wildcat in Upton County. The location is on land owned in fee by former Postmaster General Albert Sidley Burleson.

TYLER, TEX., CELEBRATES

TYLER, Tex., Dec. 8.—C. L. Burger, manager of the Tyler Gas Co., turned natural gas from the Waskom fields into the city gas mains Tuesday morning. Monday evening at the city limits where the new pipe line connects with the city mains, a pipe 30 feet high was connected with the mains and lighted. The torch was kept burning for several hours and a public celebration held.

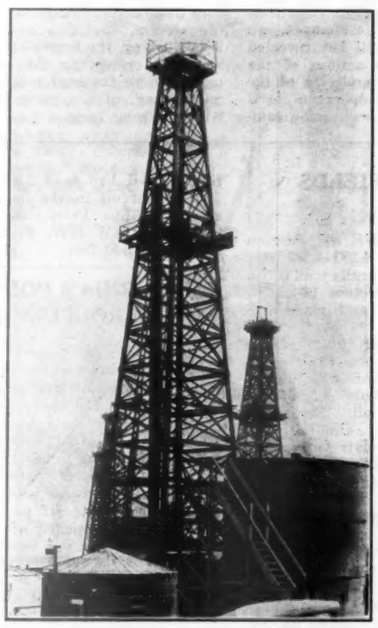
Why Chester Steel Casing Is Good Casing

The mill in which Chester Steel Casing is manufactured contains the most modern equipment obtainable.

For instance, in the hydrostatic test, pressure is recorded by Mercury Column Gauges, as we do not consider the commonly used dial gauges sufficiently reliable. The uncanny accuracy of Mercury Column Gauges has proven the wisdom of its selection many times.

South Chester has specialized in oil country pipe for years and years—casing in particular. It knows what the driller needs and supplies it.

Our distributors carry in stock a complete range of sizes.



South Chester Steel Casing used in Marine Oil Corp. wells on Signal Hill, Calif.

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Vertical
Gas Engines
Look at it any way you will, quality—and all that the term stands for—is what experienced buyers want, in an engine. You can buy "cheaper" engines than the Hope Vertical—but you cannot, anywhere, at any price, buy better engines. Within the scope of their sizes—and they range from 60 to 250 H.P. per unit—every requirement can be met. And their dependability is what you would expect from 20 years of engine building.
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MT. VERNON, OHIO, U. S. A.

CORE DRILL SCOUT NEW ADDITION TO RANKS OF OIL FIELD WORKERS

By J. L. Dwyer

Behold the latest addition to the ranks of oildom, the core drill scout.

Since the days of the Drake well, there has been a gradual change in the nature of the duties performed by the scouts, but not since the days of the Drake well has there been a position that resembled more the duties of scouts of that era than the core drill riders.

Core drilling is in its infancy, and owing to the nature of the work there is a great amount of secrecy surrounding its progress. At this time, there is no information divulged by the crews on the core drill well.

The duties of the core drill scout consists mainly in riding the roads to a finish, and one of the requisites is an iron back. To ride a car day after day as they do, and cover the huge amount of mileage that is their task, would try the back of a Strangler Lewis or Big Munn. In his month's work, the average field scout will cover approximately 1,500 miles, and this may be contrasted with the ride of the core drill scout who will make 3,500 miles a month.

There are five oil companies in Oklahoma who have now adopted the core drill scouting system. The duties of the core drill scout are to locate definitely the site of the core drill wells and report their location and subsequent changes. Since the logs of the core drilling operations are not exchanged, an idea of what the core drill has revealed may be obtained by the actions of the company following the completion of the well. If a core drill is operating in a certain territory, and following the completion of the well this company takes substantial acreage holdings, it is reasonable to assume that they have found some evidences of structure. On the other hand, if following the completion of the well the company is inactive in the region, the reverse may be assumed.

Although the practice of exchanging core drill logs has not become general as yet, there are instances of its being done between companies. The logs are not handed around promiscuously, but they merely say to each other, "we'll give you this core drill log for that one."

In this respect core drilling is only following the footsteps of the practice that was prevalent during the early Pennsylvania days when the scouts were forced to resort to every means to obtain the status of the well. With the gradual development of the oil business to its present level, this practice of mystery has been dispensed with, and today sees the oil companies very freely exchanging information. With the start that has already been made in exchanging core drill logs, it is not too much to predict that future years will see the abolition of secrecy about the work of the core drill; but in the meantime, to ask a core driller how deep he is, constitutes a serious breach of conduct.

The core drill scout drives past the core drill machine, gets the exact part of the section, township and range where it is working, the length of move it made, and then cranks up the old flivver and moves on to the next machine, 50 or 60 miles away. It's a great life for a man with a strong back.

OKLAHOMA FIELDS

(Continued from Page 50)

School Land, NW cor. NE SE, Section 13-22-4w, had the sand 4,281-4,331 feet and made 840 bbls. naturally; and No. 55, NE cor. NW SE, Section 13-22-4w, had sand 4,391-95 feet and made 328 bbls. naturally.

North of the producing limits of the deep sand in the pool, the Prairie Oil & Gas Co.'s No. 6, SE cor. SE, Section 12-22-4w, had sandy shale 3,594-3,624 feet with a hole full of oil. This is an old well drilled deeper. On the east side of the pool the Sinclair Oil & Gas Co.'s No. 9 Shaffer, NE cor. NW SE, Section 18-22-3w, had the upper sand 2,096-2,112 feet with a total depth of 2,305 feet. It was plugged back to 2,263 feet and is pumping 6 bbls. an hour; No. 23 Hartley, SE cor. NE NW, Section 18-22-3w, had the sand 2,089-2,113 feet and is pumping 50 bbls.

Osage County

Sidwell and others are rigging up No. 2, CNL NE NE, Section 25-24-8, to drill deeper.

In northern Osage County, the Western American Development Co.'s No. 1, SE cor. NW, Section 14-29-8, is dry and abandoned at 2,226 feet. Indian Territory Illuminating Oil Co.'s No. 3, SW cor. NW NW, Section 14-29-10, is drilling at 440 feet; and No. 17, NE cor. SW NW, Section 14-29-10, is a machine rigged up. Duffield and others have spudded No. 16, NW cor. SW SW, Section 35-29-10. Owen-Osage Co.'s No. 356, NE cor. NW NE, Section 33-28-11, is spudded. Barnsdall Oil Co. has completed a well in No. 5, NW cor. SE NW, Section 15-27-10. Sand was 1,958-67 feet and the well is making 25 bbls. after a shot of 3 quarts. Mid-Kansas Oil Co. is drilling at 800 feet in No. 1, NE cor. NW, Section 1-26-11. Wrightsmna Petroleum Co. is drilling at 450 feet in No. 1, CSL SW SE NW, Section 19-25-8. McCune and others' No. 4, SW cor. SE NW, Section 15-24-8, had 1,000,000 feet of gas in sand 390,422 feet.

In the Burbank Field, the Carter Oil Co. has a rig on the ground for No. 8, NW cor. SE NW, Section 9-26-6. Lewis Oil Co.'s No. 15, SE cor. NE NE, Section 21-26-6, had sand 2,958-75 feet with 400 feet of oil in the hole. It will be shot. Phillips Petroleum Co.'s No. 1, CWL SW NW NW, Section 8-27-6, is drilling at 340 feet.

CALIFORNIA'S POSITION IN PETROLEUM INDUSTRY

(Continued from Page 29)

though any further amount of curtailment in production will be made throughout the State for the present, although several operators have been trying to arrive at some mutual understanding with a view to shutting in additional heavy oil.

It is not possible under present conditions to estimate production for a longer period than six months as a new field should be opened up in the meantime. The writer has ventured the opinion that shipments to the East Coast will continue during 1926 because of the belief that either Seal Beach or some other new field will be opened up before the end of next June. Wildcatters are quite active and the law of averages indicates a new producing area. Of course new fields cannot be opened up indefinitely as each addition renders the next search a little more difficult. The geologist of the future will, as a result, soon busy himself looking for hidden structures and, while new fields will be less frequent, there is still a large fertile territory to prospect. This should result in a more general use of the diamond drill for structural survey work.

Gasoline Shipments Greater

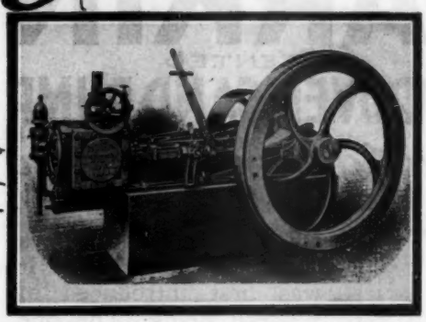
Shipments of crude oil to Atlantic and Gulf Coast ports for the current year to date are naturally considerably lower than similar movements during 1923-24 but gasoline shipments on the other hand have shown a big increase. During 1923, a total of 60,950,000 bbls. of crude was shipped from California to Atlantic and Gulf Coast ports, the average gravity being around 29.0 degrees. A large part of this oil came from Santa Fe Springs, although, of course, it is practically impossible to specify the approximate amount with certainty. The sudden decline in the production of this area resulted in the use of more Huntington

(Continued on Page 115)

"OILWELL" ESTD 1862 C O TRADE MARK REGISTERED

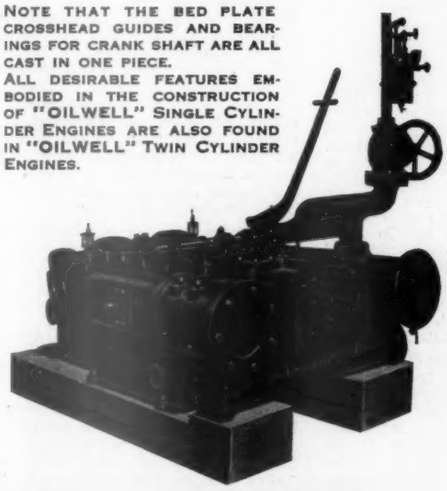
Developed Drilling Engine

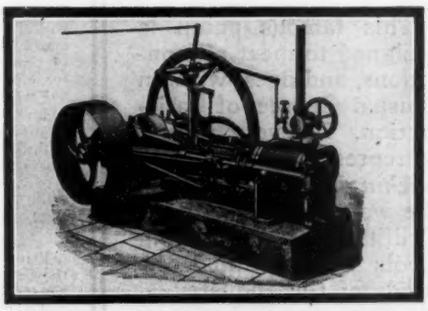
SUPREME — IN 1925



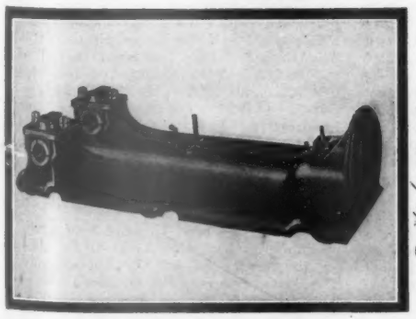
6 1911—TWO MORE REFINEMENTS CAUSING INCREASED EFFICIENCY; NAMELY, THE SPLIT, ADJUSTABLE SLIDE VALVE BRACKET AND THE LINK LEVER.

8 NOTE THAT THE BED PLATE CROSSHEAD GUIDES AND BEARINGS FOR CRANK SHAFT ARE ALL CAST IN ONE PIECE. ALL DESIRABLE FEATURES EMBODIED IN THE CONSTRUCTION OF "OILWELL" SINGLE CYLINDER ENGINES ARE ALSO FOUND IN "OILWELL" TWIN CYLINDER ENGINES.

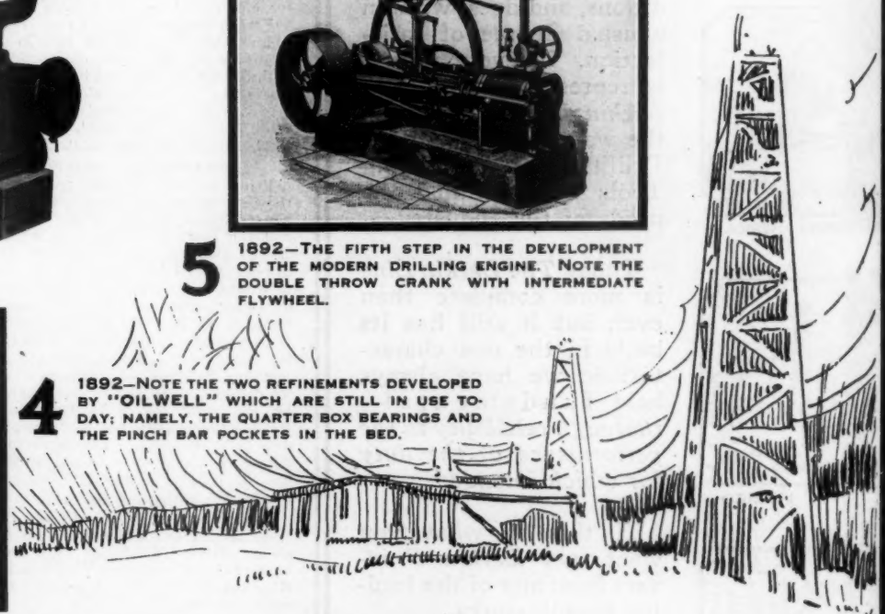




5 1892—THE FIFTH STEP IN THE DEVELOPMENT OF THE MODERN DRILLING ENGINE. NOTE THE DOUBLE THROW CRANK WITH INTERMEDIATE FLYWHEEL.



4 1892—NOTE THE TWO REFINEMENTS DEVELOPED BY "OILWELL" WHICH ARE STILL IN USE TODAY; NAMELY, THE QUARTER BOX BEARINGS AND THE PINCH BAR POCKETS IN THE BED.



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Its popularity has spread rapidly since it was first introduced in Eastern fields. The one reason for its present wide distribution in service is *good results.*

This famous pump is designed to meet all conditions, and does, with an unusual degree of satisfaction. In every way it is representative of *The Larkin Line* and reflects the way in which all our Drilling and Fishing Tools have fulfilled the needs of the Industry.

Today *The Larkin Line* is more complete than ever, but it still has its basis in the one characteristic we have always held fundamental—*thorough reliability in the performance of the duty for which intended.*

If this is what you want, get *Larkin Products* from any of the leading supply stores.

Our new catalogue No. 30 *describes The Larkin Line. May we send you a copy?*

LARKIN & CO.

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WEST AFRICAN OIL IMPORTS COME LARGELY FROM THE UNITED STATES

*By Vice Consul C. E. Macy, Dakar

Imports of mineral oils (French statistical classification "huiles de petrole et de schiste, huiles lourdes et residus de petrole") into French West Africa during 1924 amounted to 6,771,000 kilos, compared with 8,200,000 in 1923 and 5,748,000 in 1913. The annual importation for the period 1909 to 1913, inclusive, averaged 4,520,000 kilos, and for the war years, 1914 to 1918, inclusive, 4,454,000.

Of the pre-war importation 40 per cent came from the United States, 24 per cent from the United Kingdom and Nigeria, 18 per cent from Germany, and 10 per cent from France. Postwar imports have come almost entirely from the United States, which furnished 94 per cent of the 1919; 90 per cent of the 1920, 1921 and 1922; and 83 per cent of the 1923 receipts. Statistics as to the direction of trade in 1924 are not yet available.

Senegal and Dahomey

Most of the mineral oils coming into French West Africa are imported by Senegal and Dahomey. In 1923 Senegal, with the Sudan, took 52 per cent of the total quantity imported, followed by Dahomey with 23 per cent. Imports of kerosene, gasoline and heavy oils are not segregated in the officially published statistics of Senegal, but it has been estimated that the 1923 imports were 31 per cent kerosene, 32 per cent gasoline, and 37 per cent heavy oils, the last item consisting mainly of lubricating oils. No fuel oil was imported during that year. Total 1924 petroleum imports of this colony approximated 2,443,000 kilos, according to unofficial data, compared with 2,517,000 kilos in 1923 and 930,000 in 1913. Imports into Dahomey during 1924 totaled 2,523,231 kilos, compared with 1,948,537 in 1923, 778,767 in 1922, and 1,751,923 in 1913. No statistics as to the direction of trade are available for either of these colonies.

French Guinea imported approximately 614,000 kilos of mineral oils in 1924, according to unofficial data, compared with 619,000 in 1923 and 920,000 in 1913. There are no pre-war statistics for the Ivory Coast, but unofficial figures show 1,150,783 kilos for 1924, 712,123 for 1923, and 573,867 for 1920.

New Route to French Sudan

Prior to 1923 a large percentage of the petroleum products consumed in the French Sudan entered by way of Senegal and the ports of Dakar and St. Louis. As a result of the completion of the railway from Conakry in French Guinea to Kankan, however, most of the present oil import probably moves by rail from Conakry to Kouroussa and from there is transshipped to boats and floated down the Niger to the Sudan. By this latter method the cost of transportation is understood to be cheaper than shipment by rail from Dakar to Bamako. No statistics are available for French Sudan prior to 1923. The total imports during that year were valued at $38,365 and in 1924 at $33,947.

A Divided Market

Imports of mineral oils into British West Africa (with the exception of the colony of Gambia) during 1924 were almost entirely supplied by the United Kingdom and the United States. A summary follows:

Petroleum Imports of British West Africa During 1924

Sources	Kero. Gallons	Gaso. Gallons	Fuel Oil Gallons	Lub. Oil Gallons
United Kingdom	233,831	6,266	277,598	368,453
United States	5,520,067	2,839,646	11,955	79,148
Other	24,255	2,003	682	17,979
Total	5,778,153	2,848,915	290,235	465,580

Imports into Gambia cannot be segregated into classes because reports thus far available for 1924 group all mineral oils under one heading—"nonedible oils"—receipts of which totaled 174,020 gallons. Of this amount the United States furnished 151,498 and the United Kingdom 18,843 gallons. Receipts of fuel oil were nominal. During 1923 gasoline imports amounted to 46,865 gallons, of which the United States contributed 39,079; kerosene, 97,569, all but 400 coming from the United States; and lubricating oil, 7,707, supplied largely by the United Kingdom and France.

Gold Coast Gasoline and Kerosene

Most of the fuel oil imported into British West Africa comes to the Gold Coast from the United Kingdom, which supplied 219,888 of a total Gold Coast importation of 224,622 gallons in 1924 and 120,423 of a total of 122,806 in 1923. In 1920, due to postwar conditions, the United States furnished 88 per cent. During 1924 imports of gasoline by the Gold Coast reached 1,796,388 gallons, of which the United States furnished 1,790,261, compared with a total of 1,705,931 in 1923, and the American contribution of 1,647,889 gallons in that year. Kerosene receipts totaled 1,870,109 gallons in 1924, a decrease from 2,234,234 in 1923. The share of the United States declined from 2,183,375 to 1,820,893 gallons. Lubricating oil imports showed an increase—in the total from 162,829 gallons to 242,137; in receipts from the United Kingdom, which led this trade, from 89,176 to 156,550; and in the American share from 72,133 to 74,217.

Products Imported by Nigeria

Separate statistics for Nigerian fuel oil imports were not maintained prior to 1924, when 158,372 gallons were brought in, 150,716 coming from the United Kingdom and 6,974 from the United States. Lubricating oil figures are also available for only that year, and show a total of 217,419 gallons imported, of which the United Kingdom supplied 208,347; the United States, 3,272; and the Netherlands, 4,870. Gasoline and kerosene imports were as follows:

Gasoline and Kerosene Imports Into Nigeria, British West Africa

Products and Sources—	1923 Gallons	1924 Gallons
Gasoline—		
United Kingdom	334	1,808
United States	755,637	968,920
Other	5,384	1,036
Total	751,855	971,764
Kerosene—		
United Kingdom	132,167	208,547
United States	2,427,053	3,181,440
Other	1,468	159
Total	2,560,688	3,389,946

Sierra Leone Imports

Fuel and lubricating oil statistics for Leone, British West Africa, are available only for 1924, when this colony received 7,241 gallons of fuel oil, 6,994 from the United Kingdom and the remainder from the United States, and 6,024 gallons of lubricating oil, the United Kingdom supplying 3,551 and the United States 1,659. The United States furnished 80,465 of the 80,763 gallons of gasoline imported in 1924 and 59,368 of the 64,248 received in 1923. Of the total kerosene importation, 518,098 gallons in 1924 and 479,352 in 1923, it contributed 517,734 and 479,065 gallons, respectively.

*Report to the United States Department of Commerce.

PRAIRIE PIPE LINE SHIPMENTS

Prairie Pipe Line shipments of crude oil in November were 3,850,768.68 bbls., or an average of 128,359 bbls. a day. The same company in October shipped 3,990,645 bbls., or an average of 128,731 bbls., and in September 4,318,497 bbls., or 139,306 bbls. a day. The company's November average daily shipments were 372 bbls. less than in October and 10,947 bbls. a day less than in September.

$225,000 FOR LEASE

FORT WORTH, Tex., Dec. 5.—The Humble Oil & Refining Co. is reported to have taken an additional lease on property of the W. T. Waggoner estate in Wilbarger County, aggregating 320 acres, for which it is said to have paid about $225,000. The Humble Oil & Refining Co. ranks right along with the Landreth Production Co. as the largest oil producer in Wilbarger County.

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1 Long-lived, trouble free, economical service.

Murruco Belts are designed and built for difficult power transmission.

They give dependable service for months and years.

2 Pump more barrels; drill more footage.

This is not an idle boast, but a fact. Our service records prove the superiority of Murruco Belts in this regard.

3 No bootlegging.

The plies of Murruco belts will not separate or ripple, due to the high quality materials used and the Murray process of construction.

Murruco belting resists heat, moisture, deterioration and climatic variations.

4 No stretching.

The stretch is taken out of Murruco materials before the belting is made. You do not lose time taking up your belt.

5 No breaking at clamps.

Murruco Belting is strong and durable. It stands the gaff of intermittent loads and does not spring or give, thus saving the fastenings, the journals and the belt itself.

6 No slipping.

The frictioned surface and the rubber-covered and stitched surface give better pulley contact, greater power, and no danger of slipping. Murruco Belts won't run off the pulley on quarter-turn drives. They do not need to be run as tight as other belts, thus giving you longer service.

7 Flexibility.

Murruco Belts run smoothly and easily because they are pliable. They are easy on your engine and on the bearings.

8 Reliability.

Experienced rubber craftsmen build Murruco belts slowly, carefully, painstakingly—to stand up well in heavy oilfield duty under exacting conditions. With perfect equipment at their command, the best of raw materials to use and adequate facilities for careful inspection and rigorous testing, Murruco workmen build belting without a superior in the petroleum industry.

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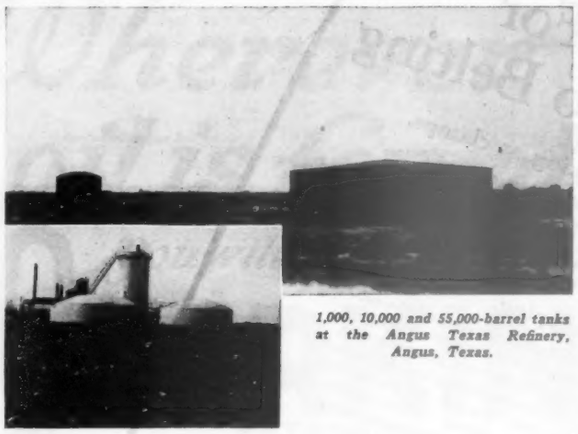

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Petroleum Statistics for October

G. R. Hopkins, Petroleum Economist

The production of crude petroleum in the United States, as reported to the Bureau of Mines, Department of Commerce, for the month of October, 1925, amounted to 64,273,000 bbls., a daily average of 2,073,000 bbls. This represents a decrease from September production of 84,000 bbls. per day, or 4 per cent, which is the most acute drop in production for any month of the year. Decreased production in Oklahoma—the influence of the Garber Field not yet being felt—and in California was responsible for most of the decreased production. Production in the Rocky Mountain district continued to rise, though production in the Salt Creek Field dropped for the first time in four months. The Rocky Mountain district was the only district to show an increase in production for October over September.

Crude oil stocks east of California amounted to 298,110,000 bbls. on October 31, 1925. This represents a decline during the month of almost 3,000,000 bbls.—the fifth successive month in which there has been a decline in these stocks. Wth the exception of a 200,000-bbl. decrease in tank-farm stocks, this decline was due to a marked decrease in refinery stocks. Pipe line and tank-farm stocks remained steady in al lthe districts east of the Rockies. In California stocks of light crude amounted to 43,773,000 bbls., October 31, an increase during the month of 1,000,000 bbls. Stocks of heavy crude and fuel oil in the State continued their rise, the total for October of 80,596,000 bbls being an increase of over 1,500,000 bbls. over stocks for September.

Refined Products

Runs to stills during the month of October, 1925, amounted to 64,129,000 bbls., of which 3,268,000 bbls. was foreign crude petroleum. This represents a small decrease in daily average crude runs from September figures but is an increase of 15 per cent over October, 1924.

Gasoline production for October amounted to 944,433,000 gallons, a daily average of 30,466,000 gallons. This represents an increase over the production of the previous month of 1 per cent and over October, 1924, of 24 per cent. The indicated domestic consumption during the month was 832,000,000 gallons. This represents a decrease in daily average consumption from September of 5 per cent, but is an increase over October, 1924, of 11 per cent. In 1924 October consumption exceeded that for September and the reverse for this year was no doubt due to the generally unfavorable weather conditions. Exports increased only slightly and stocks were increased 15,000,000 gallons, standing October 31, 1925, at 1,529,000,000 gallons. This was the first increase in gasoline stocks to be recorded since May. Assuming that imports, exports and domestic demand will remain constant during November, these stocks represent 53 days' supply as compared to 51 days' supply on hand the previous month and 44 days' supply on hand October 31, 1924.

The production of kerosene for October showed an increase over September, yet consumption dropped from the high figures of the latter month. Stocks were reduced 18,000,000 gallons, standing October 31 at 335,000,000 gallons, the low point for the year. Production and stocks of lubricants showed comparatively little change, a decrease in home consumption being compensated by an increase in exports.

The refinery figures of this report were compiled from schedules of 320 refineries which operated during October at 81 per cent of their recorded daily crude oil capacity of 2,550,000 bbls. This compares with 323 refineries, operating at 82 per cent of 2,535,000 bbls. capacity in September.

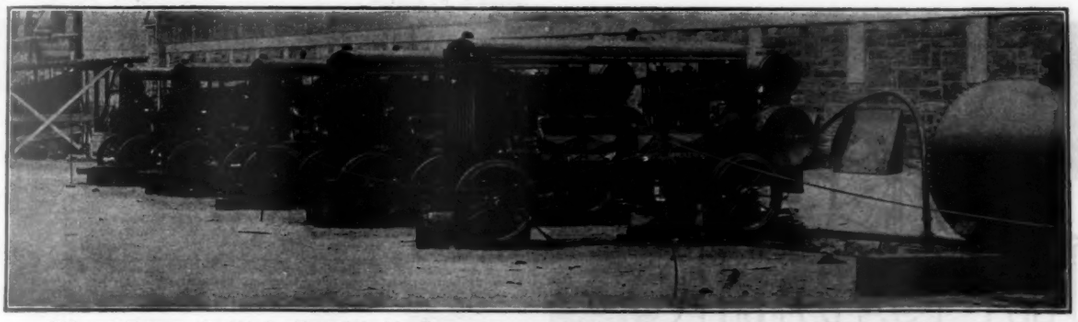
PRODUCTION OF CRUDE PETROLEUM BY FIELDS AND STATES WITH CLASSIFICATION BY GRAVITY
(Barrels of 42 U. S. Gallons)

	Sept., 1925*		Oct., 1925		Jan.-Oct.,	Jan.- Oct.,
Field—	Total	Daily Av.	Total	Daily Av.	1925	1924†
Appalachian	2,312,000	77,067	2,344,000	75,613	22,876,000	22,829,000
Lima-Indiana	179,000	5,967	173,000	5,581	1,812,000	1,970,000
Illinois-S. W. Ind.	721,000	24,033	731,000	23,581	7,127,000	7,411,000
Mid-Continent	35,494,000	1,183,141	34,901,000	1,125,836	354,073,000	313,337,000
Gulf Coast	2,748,000	91,600	2,767,000	89,258	26,379,000	24,061,000
Rocky Mountain	3,191,000	106,366	3,342,000	107,806	29,302,000	37,739,000
California	20,063,000	668,759	20,015,000	645,648	191,802,000	192,328,000
Total U. S.	64,708,000	2,156,933	64,273,000	2,073,323	633,371,000	599,725,000
State—						
Arkansas	6,695,000	223,167	6,306,000	203,419	62,684,000	39,397,000
California	20,063,000	668,759	20,015,000	645,648	191,802,000	192,328,000
Colorado	136,000	4,533	143,000	4,613	841,000	324,000
Illinois	667,000	22,233	677,000	21,839	6,582,000	6,843,000
Indiana	68,000	2,267	66,000	2,129	701,000	805,000
Southwestern	54,000	1,800	54,000	1,742	545,000	568,000
Northeastern	14,000	467	12,000	387	156,000	237,000
Kansas	3,421,000	114,033	3,453,000	111,387	31,799,000	24,150,000
Kentucky	562,800	18,760	553,900	17,868	5,714,000	6,271,400
Louisiana	1,669,000	55,633	1,717,000	55,387	16,693,000	17,730,000
Gulf Coast	286,000	9,533	345,000	11,129	2,416,000	2,024,000
Rest of State	1,383,000	46,100	1,372,000	44,258	14,277,000	15,706,000
Montana	388,000	12,933	474,000	15,290	3,166,000	2,351,000
New Mexico	127,000	4,233	145,000	4,677	706,000	66,000
New York	143,000	4,767	149,000	4,806	1,368,000	1,204,000
Ohio	611,000	20,367	617,000	19,904	6,000,000	5,731,000
Central and East	446,000	14,867	456,000	14,710	4,344,000	3,998,000
Northwestern	165,000	5,500	161,000	5,194	1,656,000	1,733,000
Oklahoma	15,276,000	509,208	14,879,000	479,965	147,584,000	143,007,000
Osage County	2,306,000	76,866	2,262,000	72,968	24,018,000	33,199,000
Rest of State	12,970,000	432,342	12,617,000	406,997	123,566,000	109,808,000
Pennsylvania	673,000	22,433	679,000	21,903	6,573,000	6,337,000
Tennessee	1,200	40	2,100	68	12,400	5,600
Texas	11,181,000	372,700	11,313,000	364,936	121,692,000	113,114,000
Gulf Coast	2,462,000	82,067	2,422,000	78,129	23,963,000	22,037,000
Rest of State	8,719,000	290,633	8,891,000	286,807	97,729,000	91,077,000
West Virginia	486,000	16,200	504,000	16,258	4,864,000	5,013,000
Wyoming	3,540,0000	84,667	2,580,000	83,226	24,589,000	35,038,000
Salt Creek	1,923,000	64,100	1,959,000	63,193	18,013,000	27,665,000
Rest of State	617,000	20,567	621,000	20,033	6,576,000	7,373,000
Classification by Gravity: (approx.)						
Light crude	45,172,000	1,505,733	45,398,000	1,464,452	453,711,000	456,729,000
Heavy crude	19,536,000	651,200	18,875,000	608,871	179,660,000	142,996,000

*Revised. †Final figures.

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES (Bbls.)

At Refineries: Reported by Location of Storage—	Sept. 30, '25	Oct. 31, '25	Oct. 31,'24a
East Coast: Domestic	7,642,000	6,079,000	8,440,000
Foreign	2,258,000	2,290,000	1,135,000
Appalachian	1,325,000	1,374,000	1,367,000
Indiana, Illinois, etc.	934,000	1,031,000	1,508,000
Oklahoma, Kansas, etc.	4,422,000	3,793,000	5,284,000
Texas: Inland	1,131,000	984,000	1,178,000
Gulf Coast: Domestic	5,390,000	5,169,000	4,839,000
Foreign	580,000	610,000	469,000
Arkansas and Inland Louisiana	716,000	715,000	294,000
Louisiana, Gulf Coast: Domestic	3,725,000	3,384,000	4,313,000
Foreign	1,042,000	1,095,000	1,081,000
Rocky Mountain	1,494,000	1,449,000	1,229,000
U. S. total east of California	30,660,000	28,033,000	31,127,000
Elsewhere than at refineries: Reported by field of origin: Appalachian:			
N. Y., Pa., W. Va., Eastern and Central Ohio Gross	7,141,000	7,124,000	7,197,000
Net	6,860,000	6,820,000	6,938,000
Kentucky Gross	1,926,000	1,818,000	2,528,000
Net	1,827,000	1,711,000	2,400,000
Lima-Indiana Gross	1,302,000	1,260,000	1,468,000
Net	1,100,000	1,058,000	1,253,000



Chicago Pneumatic 300 ft. Portable Air Compressors supplying air for trenching and laying 48" gas main.

CP Portable Air Equipment Reduces Service Installation Costs

CP-8 and 10 Rock Drills on trench work.

Boyer (Type A) Superior Rammers tamping backfill.

Public Service Companies are awake to the fact that time and labor can be quickly and definitely saved on service installations, maintenance and repairs by the use of CP Portable Equipment.

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The Little Giant Air Drill will bore openings from basement to curb, quickly and without disturbing the surface of lawns, and prevents destruction of flag stones.

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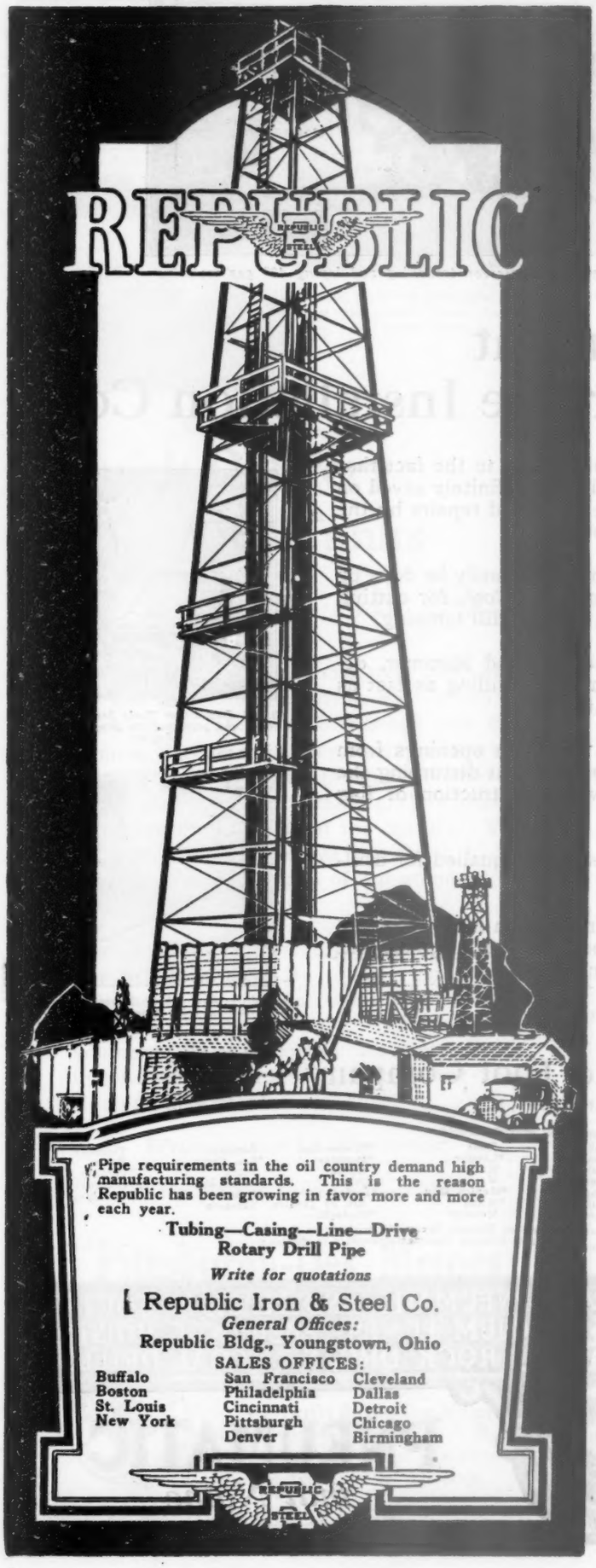


Illinois-S. W. Indiana	Gross	11,090,000	11,047,000	11,762,000
	Net	10,620,000	10,574,000	11,231,000
Mid-Continent—				
Oklahoma, Kansas, Central, North and West Texas	Gross	171,671,000	170,883,000	194,037,000
	Net	159,366,000	159,105,000	182,862,000
Northern Louisiana and Arkansas	Gross	43,197,000	43,800,000	37,945,000
	Net	41,024,000	41,614,000	36,808,000
Gulf Coast	Gross	20,641,000	20,892,000	21,524,000
	Net	20,229,000	19,876,000	21,116,000
Rocky Mountain	Gross	28,623,000	28,635,000	29,266,000
	Net	28,589,000	28,605,000	29,242,000
U. S. total pipe line and tank farm stocks east of California	Gross	285,591,000	285,018,000	305,727,000
	Net	269,582,000	269,369,000	290,849,000
Foreign crude petroleum on Atlantic Coast		143,000	47,000	128,000
Foreign crude petroleum on Gulf Coast		596,000	661,000	461,000
		739,000	708,000	589,000
Grand total refinery, pipe line and tank farm stocks east of California and stocks of foreign crude held in the U. S. by importers elsewhere than at refineries		300,981,000	298,110,000	322,565,000
Classification by gravity (approx.):				
East of California, elsewhere than at refineries:				
Light crude (44 degrees and above)		222,836,000	222,041,000	.....
Heavy crude (below 24 degrees): Domestic		46,746,000	47,328,000	.....
Foreign		739,000	708,000	.....
California (stocks as defined in July report), light		42,765,000	43,773,000	.....
Heavy		78,905,000	80,696,000	.....

*Final figures.

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (Barrels)
(From Bureau of Foreign and Domestic Commerce)

	September, 1925 Total	September, 1925 Dly. Av.	October, 1925 Total	October, 1925 Dly. Av.	Jan.-Oct., 1925	Jan.-Oct., 1924
Imports:	4,027,000	134,233	4,367,000	140,871	52,754,000	65,265,000
From Mexico	3,522,000	117,400	4,079,000	131,581	48,321,000	61,765,000
From other countries	505,000	16,833	288,000	9,290	4,533,000	3,520,000
Exports:	922,000	30,734	1,290,000	41,613	11,736,000	15,541,000
Domestic crude oil:						
To Canada	586,000	19,533	1,026,000	33,097	7,650,000	9,596,000
To other countries	304,000	10,134	252,000	8,129	3,893,000	5,610,000
Foreign crude oil	32,000	1,067	12,000	387	193,000	335,000

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS (Barrels)
(Production plus imports minus exports—*plus stocks, exclusive of consumers' stocks, at beginning of month minus stocks at end of month)

	†Sept'mb'r, 1925 Total	†Sept'mb'r, 1925 Dly. Av.	October, 1925 Total	October, 1925 Dly. Av.	Jan.-Oct., 1925	Jan.-Oct., 1924
Domestic petroleum by fields of origin:						
Appalachian	2,347,000	78,233	2,500,000	80,645	23,631,000	32,710,000
Lima-Indiana	176,000	5,867	215,000	6,935	1,975,000	1,695,000
Illinois and S. W. Ind.	1,055,000	35,167	777,000	25,065	7,423,000	7,370,000
Mid-Continent	36,762,000	1,225,400	34,646,000	1,117,613	364,006,000	298,289,000
Gulf Coast	3,043,000	101,433	3,016,000	97,290	26,603,000	27,225,000
Rocky Mountain	3,159,000	105,300	3,317,000	107,000	29,369,000	28,434,000
Deliveries and exports	46,542,000	1,551,400	44,471,000	1,434,548	453,007,000	395,623,000
Deliveries	45,652,000	1,521,733	43,193,000	1,393,322	441,464,000	370,417,000
Foreign petroleum	4,066,000	135,534	4,386,000	141,484	52,587,000	65,744,000
Deliveries of domestic and foreign petroleum	49,718,000	1,657,267	47,579,000	1,534,806	494,051,000	436,161,000

*Including exports of California oil. †Revised.

***NUMBER OF PRODUCING OIL WELLS COMPLETED**

September, 1925	October, 1925	Jan.-Oct., 1925	Jan.-Oct., 1924
1,501	1,420	14,198	12,573

*For States east of California, from The Oil and Gas Journal; for California, from the American Petroleum Institute.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES
(From Panama Canal Record)

	September 1925	October 1925	Jan.-Oct., 1925	Jan.-Oct., 1924
Crude oils: Long tons (2,240 lbs.)	136,000	101,000	1,771,000	4,872,000
Barrels (approximate)	995,000	735,000	12,929,000	35,569,000
Refined products: Long tons (2,240 Lbs.)	77,000	132,000	1,309,000	578,000

COMPARATIVE ANALYSES OF MAJOR REFINED PRODUCTS
October, 1925, and preceding month.

	Production	*Imports	*Exports	Stocks end of Period	Domestic Demand
GASOLINE (Gal.):					
August	972,689,000	13,180,000	124,042,000	1,540,716,000	931,901,000
September	906,109,000	7,633,000	91,441,000	1,514,150,000	848,867,000
October	944,433,000	9,009,000	106,570,000	1,529,248,000	831,774,000
KEROSENE (Gal.):					
August	187,984,000	45,000	31,685,000	401,490,000	148,874,000
September	197,834,000	1,742,000	48,112,000	352,656,000	180,298,000
October	215,158,000	80,000	37,937,000	335,001,000	144,956,000
LUBRICANTS (Gal.):					
August	112,069,000	176,000	26,615,000	282,513,000	80,686,000
September	107,717,000	25,000	23,654,000	283,925,000	82,676,000
October	109,534,000	42,000	31,801,000	286,595,000	75,105,000
WAX (Lbs.):					
August	47,455,000	1,338,000	25,717,000	117,084,000	18,934,000
September	46,713,000	219,000	29,256,000	108,679,000	26,081,000
October	50,182,000	734,000	32,961,000	113,649,000	12,985,000
GAS AND FUEL OIL (Gal.):					
August	1,404,459,000	40,672,000	105,955,000	†1,254,228,000	.....
September	1,330,955,000	27,402,000	117,934,000	†1,256,435,000	.....
October	1,321,652,000	30,695,000	121,674,000	†1,215,829,000	.....
October, 1924, for comparison:					
Gasoline (Gals.)	760,847,000	9,113,000	95,493,000	1,152,374,000	751,499,000
Kerosene (Gals.)	232,666,000	2,978,000	90,359,000	308,125,000	134,909,000
Lubricants (Gals.)	97,223,000	10,778	31,217,000	247,998,000	61,802,000
Wax (Lbs.)	40,924,000	927,000	30,814,000	91,077,000	18,150,000
Gas and Fuel Oils (Gals.)	1,160,683,000	41,137,000	134,984,000	1,611,586,000	1,095,119,000

*From Bureau of Foreign and Domestic Commerce. Exports, except for wax, include shipments to Alaska, Hawaii and Porto Rico.
†These stocks for east of California only.

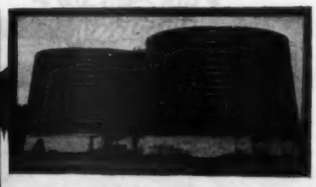
RUNS TO STILLS AND OUTPUT OF REFINERIES IN THE UNITED STATES
October, 1925

Oils run to stills (bbls.):	Crude Oils— Domestic	Crude Oils— Foreign	Unfinished Oils	Natural-Gas Gasoline	Oils Run to Stills
East Coast	8,373,846	2,230,518	442,471	238,808	11,285,643
Appalachian	2,159,622	.....	90,525	35,399	2,285,546
Indiana, Illinois, etc.	5,477,597	.....	372,804	77,307	5,927,708
Oklahoma, Kansas, etc.	7,960,179	.....	366,579	201,400	8,528,158
Texas	11,713,291	438,266	456,499	394,294	13,002,250
Louisiana and Arkansas	5,350,016	598,861	208,454	44,087	6,201,418
Rocky Mountain	2,527,122	.....	862,735	64,449	3,454,306
California	17,300,025	.....	*323,474	280,465	18,903,964
Total U. S.	60,861,698	3,267,645	3,123,541	1,436,209	68,689,093
Daily average 10/25	1,963,281	105,408	100,759	46,329	2,215,777
Daily average 9/25	1,979,516	96,421	101,904	45,517	2,223,358
Texas Gulf Coast	9,003,738	438,266	374,638	367,677	10,184,319
Louisiana Gulf Coast	3,942,217	598,861	191,062	.....	4,732,140

Output and losses:	Gasoline (Gals.)	Kerosene (Gals.)	Gas and Fuel Oils (Gals.)	Lubricants (Gals.)	Wax (Lbs.)
East Coast	145,717,000	50,162,000	183,688,000	32,461,000	20,019,000
Appalachian	39,346,000	12,263,000	19,609,000	15,532,000	6,646,000
Indiana, Illinois, etc.	124,439,000	22,103,000	63,082,000	12,573,000	6,293,000
Oklahoma, Kansas, etc.	169,547,000	32,070,000	122,541,000	9,310,000	4,352,000
Texas	189,591,000	47,006,000	234,854,000	27,375,000	4,940,000
Louisiana and Arkansas	56,470,000	19,738,000	140,657,000	2,438,000	3,429,000
Rocky Mountain	57,337,000	7,842,000	46,454,000	2,464,000	4,489,000
California	161,986,000	23,984,000	510,767,000	7,581,000	114,000
Total U. S.	944,433,000	215,158,000	1,321,652,000	109,534,000	50,182,000
Daily average 10/25	30,466,000	6,941,000	42,634,000	3,533,000	1,619,000
Daily average 9/25	30,204,000	6,594,000	42,698,000	3,591,000	1,557,000

Skelly Oil Co., Davenport Field, Battery American Welded Stock Tanks and No. 2 American Gas Trap

Skelly Oil Co., Davenport Field, 8 210-bbl. American Welded Stock Tanks.



Skelly Oil Co., Davenport Field, 2 American All Redwood 1600-bbl. Tanks.

Selby Oil & Gas Co., Davenport Field, 6 250-bbl. American Bolted Tanks.

Pure Oil Co., Davenport Field, 210-bbl. American Welded Flow Tank.

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Galvez Oil Co., Davenport Field, 1 No. 1 American Gas Trap and 4 250-bbl. American Bolted Tanks.

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Below—Amerada Petroleum Corp., Davenport Field, American 1000-bbl. Bolted Tanks and No. 3 American Gas Trap.

At right—Magnolia Petroleum Corp., Davenport Field, Tanks reset by American Tank Company.

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Bovaird & Company—Bradford, Pa.
The Birdgeport Machine Company—Oklahoma, Kansas and Texas
Decker Tool & Supply Company—Texas
The Drillers Supply Company—Kansas
Great Northern Tool & Supply—Montana
Hinderliter Tool Company—Oklahoma
Murray Tool & Supply Company—Oklahoma
New Martinsville Supply Company—New Martinsville, W. Va.
Republic Supply Company—Oklahoma and Texas
Rope & Cordage Company—Parkersburg, W. Va.
The Staves Supply Company—Kansas
Wagner Supply Company—Texas
Western Supply Company—Oklahoma
Western Drilling Tool & Supply Company—Kansas
Williamsport Wire Rope Company—Oklahoma, Kansas, Arkansas and Wyoming

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(Walk Laid)

Worthy of Trust

Texas Gulf Coast	146,003,000	39,269,000	183,150,000	25,393,000	4,522,000
Louisiana Gulf Coast	43,941,000	18,137,000	98,152,000	2,438,000	3,429,000
Output and losses (cont.):	Coke (Tons)	Asphalt (Tons)	Other Fin. Prod. (Gals.)	Unfinished Prod. (Gals.)	Losses (Bbls.)
East Coast	19,028	137,986	5,142,000	2,158,000	372,000
Appalachian	3,397	.....	1,069,000	1,326,000	131,000
Indiana, Illinois, etc.	19,170	15,020	5,499,000	3,888,000	190,000
Oklahoma, Kansas, etc.	8,264	91	1,982,000	7,280,000	305,000
Texas	19,684	30,108	1,403,000	11,267,000	553,000
Louisiana and Arkansas	10,409	45,912	5,547,000	17,428,000	110,000
Rocky Mountain	8,810	3,112	470,000	21,089,000	134,000
California	.....	52,172	3,922,000	*27,118,000	204,000
Total U. S.	86,762	284,401	25,034,000	91,554,000	1,999,000
Daily average 10/25	2,799	9,174	808,000	2,953,000	64,000
Daily average 9/25	2,806	8,821	1,123,000	3,264,000	71,000
Texas Gulf Coast	16,676	30,108	706,186	2,146,000	487,000
Louisiana Gulf Coast	9,760	44,591	5,093,000	14,777,000	74,000

*Includes 112,561 barrels net tops produced.

GASOLINE PRODUCTION BY CRACKING, SEPTEMBER AND OCTOBER, 1925
(Gallons)

District—	September	Pct. of Prod.	October	Pct. of Prod.
East Coast	46,359,000	34	52,265,000	36
Appalachian	9,796,000	26	10,756,000	27
Indiana, Illinois, etc.	48,901,000	39	47,508,000	38
Oklahoma, Kansas, etc.	41,945,000	24	44,717,000	26
Texas	54,145,000	30	65,533,000	35
Louisiana and Arkansas	14,040,000	27	14,600,000	26
Rocky Mountain	24,201,000	43	24,674,000	43
California	320,000	..	349,000	..
Total U. S.	239,707,000	26	260,402,000	28
Texas and Louisiana Gulf Coast*	58,491,000	33	70,284,000	37

*Included above under Texas, Louisiana and Arkansas.

STOCKS HELD BY THE REFINING COMPANIES IN THE UNITED STATES
October 31, 1925

	Gasoline (Gals.)	Kerosene (Gals.)	Gas and Fuel Oils (Gals.)	Lubricants (Gals.)
East Coast	324,542,000	66,508,000	289,345,000	103,650,000
Appalachian	30,470,000	9,657,000	30,660,000	35,714,000
Indiana, Illinois, etc.	156,477,000	36,252,000	58,073,000	29,592,000
Oklahoma, Kansas, etc.	96,474,000	17,004,000	204,138,000	15,773,000
Texas	172,397,000	101,743,000	361,813,000	55,660,000
Louisiana and Arkansas	192,514,000	23,070,000	199,876,000	4,984,000
Rocky Mountain	148,697,000	11,618,000	71,924,000	5,468,000
California	407,677,000	69,149,000	.....	35,754,000
Total U. S.	1,529,248,000	335,001,000	1,215,829,000	286,595,000
Total U. S. 9/30/25	1,514,150,000	352,656,000	1,256,435,000	283,925,000
Texas Gulf Coast	149,520,000	92,134,000	306,381,000	54,226,000
Louisiana Gulf Coast	188,349,000	22,810,000	167,606,000	4,984,000

	(Lbs.) Wax	(Tons) Coke	(Tons) Asphalt	Prod. (Gals.) Other Fin.	Oils (Bbls.) Unfinished
East Coast	52,591,000	26,153	84,057	6,827,000	7,222,000
Appalachian	14,317,000	1,135	79	2,082,000	1,008,000
Indiana, Illinois, etc.	18,922,000	10,208	8,297	14,978,000	3,642,000
Oklahoma, Kansas, etc.	4,085,000	27,288	902	4,301,000	1,970,000
Texas	10,105,000	75,336	9,764	228,000	7,986,000
Louisiana and Arkansas	4,876,000	55,118	15,801	4,214,000	2,224,000
Rocky Mountain	8,586,000	52,196	7,806	32,000	1,827,000
California	167,000	.....	25,640	7,506,000	*13,482,000
Total U. S.	113,649,000	247,434	152,386	40,168,000	39,361,000
Total U. S. 9/30/25	108,679,000	250,274	143,394	46,286,000	40,023,000
Texas Gulf Coast	9,750,000	74,552	9,764	30,000	7,435,000
Louisiana Gulf Coast	4,876,000	52,072	15,047	1,425,000	1,843,000

*Includes 6,342,000 barrels tops in storage.

Natural-Gas Gasoline

The production of natural-gas gasoline in the United States during the month of October, 1925, amounted to 101,600,000 gallons, a daily average of 3,277,000 gallons. This represents an increase over September of 6 per cent. Stocks of raw natural-gas gasoline at the plants amounted to 14,761,000 gallons, October 31, an increase over September stocks of 2,677,000 gallons. Blending at the plants (exclusive of California) continued to increase, and stocks of blended motor fuel again increased.

	Natural-Gas Gasoline— Production (Net) From Reports and Estimated	Stocks End of Month	Blended Motor Fuel— Natural-Gas Gasoline Used in Blends	Naphtha or Other Oil Used in Blends	Stocks End of Month
(Gallons)					
Appalachian	8,900,000	2,933,000	394,000	527,000	287,000
Indiana, Illinois, etc.	1,900,000	178,000	54,000	6,000	15,000
Oklahoma, Kansas, etc.	33,500,000	6,923,000	2,501,000	5,277,000	1,671,000
Texas	14,800,000	2,560,000	225,000	752,000	139,000
Louisiana and Arkansas	5,600,000	993,000	6,000	10,000	5,000
Rocky Mountain	2,900,000	107,000	85,000	191,000	709,000
Total east of California	73,600,000	13,694,000	3,175,000	6,763,000	2,826,000
California	*28,000,000	1,067,000	Not available		25,000
Total U. S.	101,600,000	14,761,000	.....	.....	2,851,000
Daily average	3,277,000				

*California not estimated, returns essentially complete.

The indicated output of motor fuel in the United States from the above and other sources may be expressed by the following table:

(Gallons)	September, 1925	October, 1925
Gasoline produced at refineries	906,100,000	944,400,000
Natural-gas gasoline produced at plants	92,600,000	101,000,000
Benzol production (approximate)	*6,000,000	*6,000,000
Less natural-gas gasoline blended at refineries	57,400,000	60,300,000
Less natural-gas gasoline run through refinery pipe lines	9,000,000	9,000,000
Total United States	938,300,000	982,700,000
Daily average	31,280,000	31,700,000

*Bureau of Mines figures for the production of by-product coke indicate a slight increase in benzol production of October over September, though the difference is too small to affect this table.

MID-CONTINENT 88 REVISED

Particular stress is being placed on the usage of the new oil and gas mining lease form "Mid-Continent 88 (Revised)" as a standard form throughout the Mid-Continent area. This lease form, developed by the "Lease Committee" of the Mid-Continent Oil and Gas Association is declared by association officials and prominent oil men to be one of the best forms produced for use in the Mid-Continent.

The development of the new lease form came in answer to the demand for a standard form which would eliminate much of the confusion among the operators and landowners caused by the general use of a dozen or more now existing forms, according to association officials.

BRITISH CONTROLLED OILFIELDS

Britished Controlled Oilfields, Ltd., in week ended November 18 produced 48,433 bbls. of crude oil in Venezuela, against 47,080 bbls. the preceding week. Shipments were 6,840 tons, approximately 45,828 bbls., against 4,473 tons, 29,969 bbls. Production in the four weeks ended November 18 totaled 191,396 bbls. and shipments 24,453 tons, 163,835 bbls.

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The Iron King Manufacturing Co.
Bradner, Ohio

Say you saw it in The Oil and Gas Journal

LAWS RELATING TO OIL AND GAS RESERVOIRS

(Continued from Page 70)

started at a rate designated by the position of the point a, and it declined to b at the time t when manipulation took place. Manipulation decreases or increases the velocity of production in conformity with an increase or decrease, respectively, in the external friction head; the curve breaks and begins a decline at a different slope from a point c, below or above b.

In Article 436 the rule for finding the potential volume of a reservoir in this control was given, to-wit; The potential volume at any instant during the life of the reservoir is equal to one-half the rate of flow at the instant, multiplied by the time required to empty it. The potential volume in the present instance is therefore one-half of la multiplied by $O_1 1$. This is the entire volume represented by the curve, an amount diminished by the area abtl by the time t, leaving tbO_1 yet to be produced. Now, if we refer to Figure 233 we see that the volume of liquid to be delivered from the tank at the valve E is in no way dependent upon the setting of the valve, that is, upon the amount of external friction head applied at the valve; in any circumstance of flow from the orifice at E the 20 feet of liquid between the lines A and B is produced. Alteration in the external friction head does not affect the potential volume of the reservoir; it merely affects the rate at which it will be delivered, and consequently it affects the time denoting the life of the reservoir. This is not only true of the type gravity solution tank, but also of the type rigid gas tank, of the combinations of the solution and gas tanks of oil, gas, water, and combination wells of finite control.

In view of this principle the area tbO_1 alters its linear dimensions to another triangle of equal area. It is only necessary to compute a rectangle $tcnO_2$ equal in area to $tbmO_1$. The side tc is known from the new velocity; therefore the point O_2 becomes known, specifying a new potential life as of the time t. Thus we determine the position of O_2 in Figure 511 without repeating the process which necessitates an elapse of time. O_2 is the same point for both figures, for all potential functions reach zero value at the same instant.

513. For any point c other than b, m moves to some position on a curve A. Let

$$tb = Ve$$

and

$$O_1 t = L,$$

the life of the reservoir; then the product of the two,

$$LVe = 2\ Vo = \text{area of rectangle} = K$$

Whatever values L and Ve may obtain by manipulation, their product is a constant; therefore the line A is a rectangular hyperbola with the vertical line at t and the X-axis as asymptotes. The position of the point m is limited in the upward direction of A by the physical properties of the orifice and the reservoir interior. Its downward limit is at infinity to the right of the figure, a position determined by a complete closing of the orifice.

For a given reservoir, then, the new life forced upon it by an act of manipulation is a length of time depending inversely upon the new velocity of production. For example, if the new velocity is one-half the old one, the new life is twice the old life.

Five Pressures

514. We have observed the readjustment of the lines M and L of Figure 277 which accompanies manipulation of the orifice. (Article 291, et seq). Of the five pressures F, two alter concordantly in percentage ratio when a new value for the external friction head is established for the reservoir; internal friction and residual pressure alter in direct proportion, and both alter as the square of velocity. The other three pressures behave as indicated in the articles referred to.

The distinction between concordant action of reservoir functions and harmonious percentage variations here becomes evident: the former pertains to sudden alterations in the conditions of production, brought about in accordance with the three cases, whereas the latter pertains to natural alterations taking place in accordance with the time T as a function of delivery. The algebraic relations of the two are the same, but as we see in the present case, only two of the equations between a pressure F and velocity (Article 508) hold true for the concordant action involved with alterations in external friction.

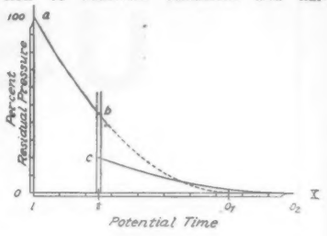

Figure 514

When flow began at a, Figures 511 and 512, we do not know what value R might have had; we can say, however, that it had a value of 100 per cent, since we took the original conditions of production as standard for comparison. At the time t, R was altered, as shown in Figure 514. It had arrived at b in harmonious percentage variation with P of Figure 511, but the alteration in external friction has caused it to drop to a point c. In Figure 512, determine the percentage ratio between tc and tb, and find the point representing this percentage on the relative velocity curve of Figure 442. Through this point draw a vertical line. The point where this line cuts the relative pressure curve indicates the percentage ratio of tc to tb in Figure 514. The point O_2 may be obtained from Figure 512, for this zero-zero point must necessarily be the same for both curves.

515. The above process of calculation is the reverse of the one usually called for in field experience. Suppose we take observations in pressures as outlined in Articles 297 and 298, following them by the calculations of Article 299; we may then determine the change in velocity by drawing a vertical line through the percentage pressure in Figure 442. This will suffice for the immediate change, which was all we needed in hydraulic control, for there we knew that the new velocity would proceed on the newly determined horizontal straight line. Now, in volumetric control, the case is different. We wish to construct the velocity curve with its decline to a new point on the X-axis. This is a simple matter.

The vertical line which we draw on the relative chart must be extended downward until it strikes the X-axis. Here we have a percentage of life indicated. It is the percentage which the old life bears to the new life, or the inverse percentage which the new life bears to the old one, both measured from the time t denoting the instant at which the physical condition of the orifice is altered. We are now able to construct the entire velocity-time curve for the potential reservoir newly set up. It is the curve which ought to be fulfilled by the reservoir as it continues to produce under the new conditions. (The two points thus determined, corresponding to c and O_2 in Figure 512, are sufficient to determine the desired curve).

516. Had we constructed the separate relative curves for the derived primary functions (Article 478), the same percentage ratios would obtain as between the functions of pressure and velocity. We would, however, have sacrificed the advantage of the vertical cut in Figure 442, whereby the new value of life can be determined at a glance.

The problem in hydraulic control was solved by the use of the formulas pre-

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Fig. 57

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Engine Oils	Asphalts
Dynamo Oils	Road Oils
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sented in Article 295. The present method gives the same result, and possesses the added advantage of simultaneously showing, by a single vertical cut on the chart of relative curves, the relations between the altered functions of the reservoir.

The potential pressure P and the potential volume Vo are not altered in this case; therefore we may say that the potential energy—the product of P and Vo—is not altered. This is to say, the total cumulative gas produced from a combination reservoir is not affected in amount by any change in the physical condition of the orifice.

Gas Velocity Altered

The rate at which the gas is produced—the gas velocity—from a combination reservoir is altered. Both the potential and suppressed gas rates are changed in direct proportion with the change in Ve, since P is the same before and after the change. (Article 457). The new gas velocity and gas volume curves can be completely drawn immediately at the time the alteration is made in the external friction head. The curves of Figure 457 become stretched negatively or positively in the direction of the ordinates, and positively or negatively in the direction of the abscissas, according to the nature of the change in the external friction. The area under the curve i remains unchanged and the length of the ordinate MO′ in Figure 460 retains the same length.

The proportional gas production is not primarily dependent upon changes in the external friction. If the reservoir were ideal, absolutely no alteration would be observed; but because the natural reservoir is not ideal, we have the secondary phenomena to consider—phenomena associated with the Jamin Action, and with subordinate structural or textural features within the reservoir.

517. If we adopt the reservoir conditions before an alteration in external friction as 100 per cent, and decrease the amount of this friction, our new conditions will be in excess of 100 per cent. The vertical line must be drawn upon the chart of Figure 445. All computations are made in an identical manner.

When the production from the reservoir is subjected to rapid alterations in external friction, a recording pressure gauge will give us the necessary data on charts which may be grouped to cover a sufficient "period of time." From these charts the average pressure is obtained—perhaps most conveniently by the use of a planimeter—and this average determines the average value for Ve, and the average value of the life, for the period of time. These values are obtained by a vertical cut on the chart of the relative curves. The fact that the reservoir functions might be declining as a consequence of the time T is immaterial, so far as the computations are concerned. All is mathematically cared for by the method outlined.

Case 2

518. A sudden alteration in the value of the static pressure causes a change in the conditions of production as tabulated in Article 302. In this control a distinction must be made between alterations in the true static pressure and alterations in the apparent static pressure. (Article 301.)

The sudden change in the true static pressure is accompanied by concordant alterations in the five pressures Fahrenheit. All reservoir functions take on new values in accordance with a vertical cut on the chart of relative curves. To locate the vertical line, it is only necessary to determine the percentage ratio between the new and old values of the potential pressure. An increase in static pressure will set the reservoir back in its history by reestablishing conditions which it had at some time previous to the change, and a decrease merely establishes at once a set of conditions which nature itself would establish in the proper elapse of time.

Potential volume and life take on new values. If, in Figures 233 and 452, we were to suddenly add or withdraw a definite amount of liquid, say from the top of the tank, obviously we would increase or decrease the volume to be obtained through the orifice by just that amount. This is true of all reservoirs belonging to this control. The vertical cut shows the direct percentage ratio between the new and old values of the life, measured from the time of the change.

Both the power and the energy of the reservoir is altered in accordance with the vertical cut on the relative curve chart. New values for the proportional production of gas, the gas velocity, and the total cumulative gas, for combination reservoirs, is determined by the cut.

The fact that the history of the reservoir is receded or advanced by this change in the static pressure is associated with the idea that the parameter p in the equations for delivery is not altered; the condition of the orifice, controlling the value of p, remains unchanged in this case.

It is evident, then, that the data for the reservoir before the change, combined with the knowledge of the new value for the potential pressure, is sufficient for the complete determination of all primary function curves for time after the change. Elapse in time for the further gathering of data is not required.

A point to be observed is the fact that the ratios between velocity and life are reversed in Cases 1 and 2. In the former case we found the relations hyperbolic; in the present they are parabolic. The two cases have an important feature in common: The position of the potential X-axis with respect to the absolute axis remains unaltered. The potential zero for all functions except time remains fixed.

Apparent Static Pressure

519. Apparent changes in the value of the static pressure, caused by the introduction of new orifices, or by their manipulation after being introduced, cannot be cared for so completely without the elapse of time for further observations.

Imagine another orifice placed in the tank of Figure 233. Let us suppose, for the present, that this orifice is identical in all respects to the first one. As measured from the time t, when the second orifice is opened, the volume for the original orifice is reduced exactly to one-half. The static pressure for the original orifice theoretically assumes an apparent value, but certainly the apparent change is not such that the new value of the potential pressure is one-half the old value. It is doubtful if any difference between the static and apparent static pressures can be detected in the tank illustrated, for it is hollow, and its pressure gradient is nearly ideal. We may expect the natural reservoir, filled with a porous medium, to display more appreciable differences, particularly if the wells are closely situated with respect to each other.

If we were certain that the orifices were exactly alike in all physical respects, as measured from t we could ascribe a new life equal to one-half the old life—one-half because, taking the two orifices together, potential volume remains the same while potential velocity is doubled; and 200 per cent velocity corresponds to 50 per cent life, as in Case 1. But we see how improbable it is that the two orifices be identical. One would most likely be larger, or offer less resistance to the fluid, or be located at a more advantageous position with respect to the reservoir, and so on. This would particularly be the case with natural reservoirs.

At the moment of the change in the value of the apparent static pressure for a given orifice, the five pressures F alter concordantly, but only velocity and power alter as indicated by the vertical cut on the chart of relative curves. For the other functions—volume, energy and life—we are compelled to make new observations upon the performance of the reservoir. These new observations will have no known definite mathematical relation to such as may have preceded the change. Two observations, with a sufficient elapse of time between them, will allow a determination of all functions,

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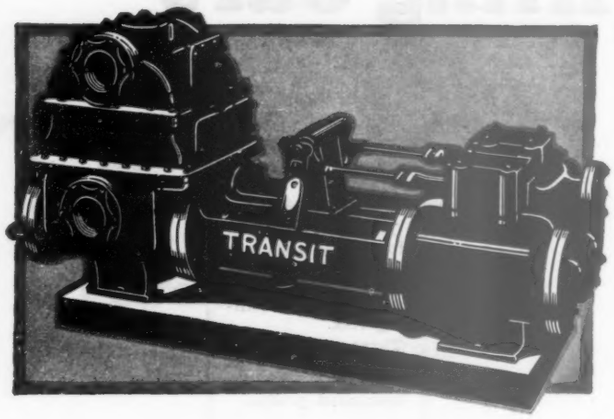

THERE is nothing very interesting about a pump until it goes wrong, or until it keeps steadily on the job for ten or twenty years without any trouble. In either case, *then* you begin to sit up and take notice.

The pump illustrated above doesn't go wrong, and so to make it interesting without the necessity of you waiting say twenty years, we have made a new type illustration of it.

Inside of the new suit is just a plain 12x 10x18" TRANSIT Separate Chest Type Suction Pump for not over 125 lbs. working pressure, and for use on suction lines, in drain pits, and as a transfer and tank pump.

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NATIONAL TRANSIT Pump & Machine Co.

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and their complete curves can be drawn by referring to the relative curves.

Rapid changes may again be cared for by the installation of a recording pressure gauge. For the period of time covered by the grouped charts of the gauge, the relation curves may be used in perfect accord with the situation. The gauge record itself covers the necessary elapse of time required for the new observations which are to be obtained independently of the old ones.

Case 3

520. The status of conditions for alterations in the constant back pressure was presented in Article 308. A change in the amount of pressure against production shifts the potential X-axis in its position with respect to the absolute axis. At the moment of the change, all five pressures F alter concordantly, and there is a quantitative exchange in pressure units between the potential and constant back pressures. All reservoir functions alter in accordance with a vertical cut on the chart of relative curves.

It is sufficient to determine the percentage ratio between the new and old values of the potential pressure at the time $\underline{t}$ of the change in order to learn the position of the vertical line for the cut. In the same manner, the percentage ratio between the new and old values of the constant back pressure locates a cut for the determination of the new relative distances between the potential and absolue axes for all functions. By this method the points O_1, O_2, O_3 and O_4 of Figures 309 and 312 were determined.

The potential volume is altered. This may be readily observed in Figure 233 where, if the valve E is lowered or raised, the volume of liquid which the reservior is capable of producing is increased or decreased, respectively. The change in the constant back pressure has the same effect on the type rigid gas tank, on combination tanks, and on oil, gas, water and combination wells of finite control. In volumetric control the change in potential volume is in direct proportion to the change in potential pressure, as shown by the relative curves of these two functions.

The vertical cut, extended downward to the X-axis of the relative curves, indicates the direct percentage ratio between the new and old values of life, measured from the time $\underline{t}$. With one exception to be noted in the next article, the history of all functions of the reservoir is receded or advanced by an alteration in the constant back pressure.

521. An analogy between this case and the one of the change in the true static pressure can be observed by referring to Figure 277, where the potential pressure may be increased or decreased by the proper shifting of either line N or line I. The two cases involving the shifting of these two lines respectively are perfectly analogous so far as the potential functions of the reservoir are concerned, but the analogy does not extend to the suppressed functions of power and energy. There is, in the present case, a redistribution of gas between the portions designated as potential and suppressed gas. It is necessary to compute the new distribution caused by the change in the constant back pressure. Having done this, the new gas velocity and gas volume curves may be drawn at once.

As in Case 1, the proportional production of gas is not primarily dependent upon changes in the constant back pressure, but only secondarily so. (Article 516.)

Rapid changes may be cared for in the usual manner by the use of a recording pressure gauge.

The Vertical Cut Illustrated

522. Figure 522 illustrates a vertical cut determined by the point $\underline{a}$ greater than 100 per cent, and another determined by the point $\underline{a}'$ less than 100 per cent. Both points are on the relative curve for pressure.

The main frame in the figure is on a Cartesian plat, whereas the extension frame is on a parabolic, logarithmic plat. Thus are combined the advantages of each plat in its place. (Article 505). The extensive curves, if lifted to the Cartesian plat of figure 445, would be found to be the tangents of the respective curves at the point 100-100. Not only does the exponent of the power function equation become the slope of the line on the logarithmic plat, but the same exponent becomes the slope of the tangent to the power function curve at the point, $x = 1$, $y = 1$. Our 100-100 point, being an expression in percentage, is in reality the point 1-1. For this reason we find the curves of the present figure apparently continuous; all curves in the main frame pass into their respective extensions without an unnatural change of curvature. The plats are intended to be merely diagrammatic; for actual use, plats with finer divisions should be selected in order that interpolations may be made easily.

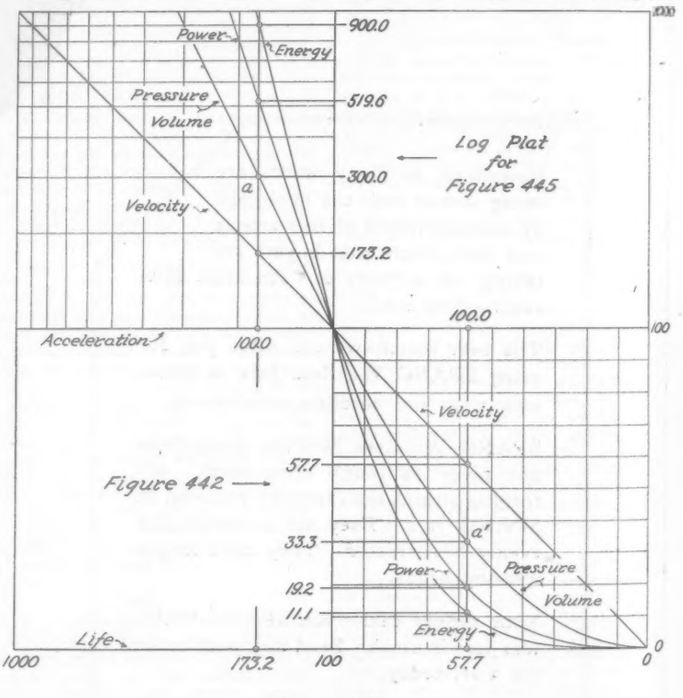

Figure 522

523. Suppose we have an oil well

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Equipped throughout with **HYATT ROLLER BEARINGS** and **BALL THRUST BEARINGS** assuring ease of operation and long life. Alemite Lubrication used for bearings; automatic force feed oiler for eccentrics; furnished in 20″ and 24″ strokes; shipping weight 20″—9,200 lbs., 24″—9,500 lbs.

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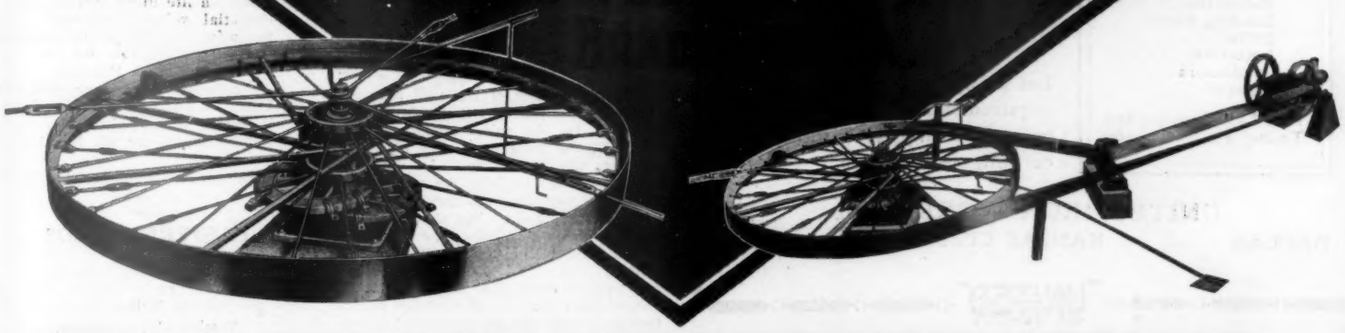

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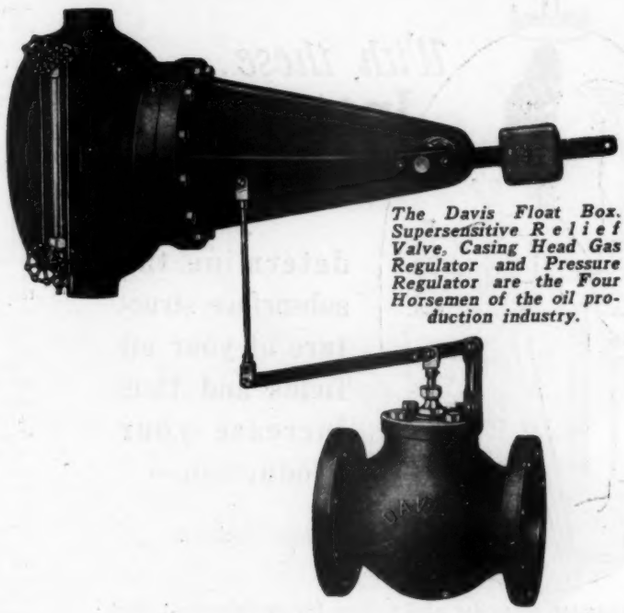

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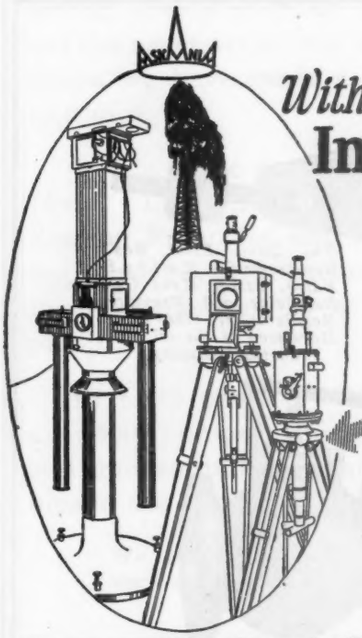

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which produces 20 bbls. per day "natural." No assistance is rendered in the way of swabbing or pumping; the well overflows its casing at this rate. We find by test (Article 235) that its potential pressure is 500 pounds per square inch. By placing the well on the pump we can take the weight of the column of fluid off the bottom of the well, and thereby increase the potential pressure to 1,500 pounds. At what rate will the well produce with the pump?

Through the point a at 300 per cent pressure draw the vertical line. The velocity curve is cut at 173.2 per cent: therefore the well will produce at the rate of 34.64 bbls. per day with the pump. Thus we know the size and speed of pump required in handling the present possible output of the well. It would be useless to install a larger pump, or to run the selected pump at a greater speed; nature will not permit a greater flow rate for the given alteration in the condition of production. An excessive speed, as we have found by experience, results in pump and rod troubles through excessive strain.

Will the installation of the pump be justified, considering the initial and maintenance costs? We see from the curve for volume that 300 per cent of the former amount is available. Having supposedly determined the former value of the potential volume by the usual method, we know at once the new value. The difference, 200 per cent, must pay the expense incurred.

How is the life of the well affected? By the curve we see that life is now 173.2 of its old value. Now we can construct the theoretic decline curve for velocity, with actual units for ordinates and abscissas, and hold the well to the indicated performance throughout its life. (Article 231.) We shall incidentally know how to regulate the decreasing speed required of the pump as time elapses.

Supposing the well to be a combination one, whatever amount of potential gas, or free gas, measured at atmospheric pressure, arrived at the orifice at the bottom of the casing before the change, is now increased to 519.6 per cent. (Article 455.) The actual space now occupied by this gas, in comparison with the space formerly occupied, can be computed from Boyle's Law, remembering that not only is each mass unit of gas expanded on account of the decreased pressure, but also that there are more mass units in the free state. (Article 361.) The total amount of free gas to be handled at the bottom of the casing, during the new life of the well, is 900 per cent of its previous amount, measured at atmospheric pressure.

If we understand the principles of Articles 455, 456 and 457, we are able to construct the complete new gas velocity curve. Furthermore, if we understand the principles of Articles 459 and 460, we are able to construct the complete new cumulative production curve for the gas.

Suppose, for a test computation, that the data with the pump installed were adopted as 100 per cent standard for comparison, and we wished to calculate the effect of removing the pump, how would we proceed? Our new potential pressure now is 33 1/3 per cent of the old value. Draw the vertical line through the point a', and read off the percentage ratios for all functions. By applying these percentages to the data for the well with the pump we obtain values for the functions without the pump. Obviously, in the present problem, these computations should lead us back to the point of beginning. This they do, for the ratios on the line through the point a' are the reciprocals of those on the line through the point a. In Article 445 the statement was made that the crossing of the curves at the 100-100 point conforms to the mechanics of reservoir problems. It is now evident that the crossing is quite systematic, since a reciprocal cut on one curve gives reciprocal points on all curves.

Combinations of Cases

524. Theoretic performance is the same in both hydraulic and volumetric control so far as instantaneous alterations in the values of the various reservoir functions are concerned. After a given alteration, each function proceeds with time in accordance with the ideal performance of its own control until the next alteration is made. The combinations of the three cases, discussed in connection with hydraulic control (Article 318 et seq) are identically applicable to volumetric control. The method of handling them is the same; and the fact that the functions may continually decline as time elapses makes no difference in the manner of treating the observed data, for the laws of the derived primary functions are invariable, whether time in the case involved be instantaneous or of finite duration.

525. Our reasons for making the distinction between external friction and the constant back pressure should become evident in the study of Cases 1 and 3 of the present control. If we deal only with hydraulic control, it is probable that such a distinction is unnecessary. (Article 320.)

The main features differing between the two functions are presented as follows:

(a) External Friction Head.
A mathematical variable with time.
Effect on life in an inverse ratio.
Potential volume unaltered.
Potential zero for all functions unaltered except that for time.

(b) Constant Back Pressure.
A mathematical constant with time.
Effect on life in a direct ratio.
Potential volume altered.
Potential zero for all functions altered.

Are we not justified in making the distinction?

EASTERN FIELDS

(Continued from Page 60)

a test on the Frank Quigley farm and rigging up on the William Meighen farm.

Week-End Completions

At the conclusion of the week of development work, the West Virginia fields completed light wells. On the waters of Breeden Creek, Harvey district, Mingo County, the Public Gas Corp. drilled its second test on the Neighbert heirs' farm a Maxon sand gasser, 50 feet deeper and showing for a 7-bbl. pumper.

In Liberty district, Marshall County, the Manufactures Light & Heat Co.'s No. 3 on the Andrew Bake heirs' farm is a light producer in the Gordon sand. In Center district, Wetzel County, the Hope Natural Gas Co.'s test on the Matthew Carney farm, an old well drilled down, is good for 5 bbls. a day in the Gordon sand.

Dusters in Boone County

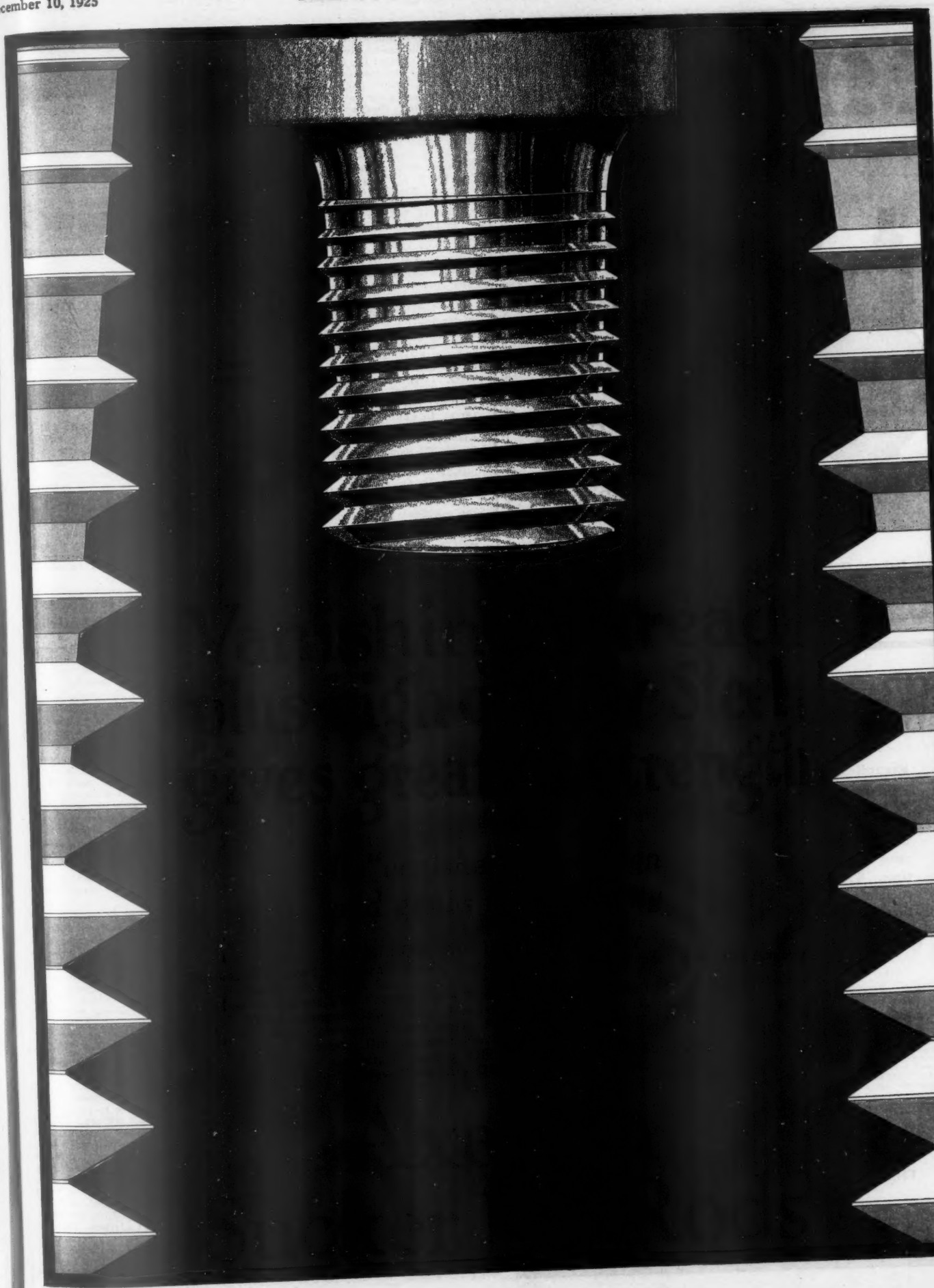
In Peytonia district, Boone County, the Owens Bottle & Machine Co. has drilled No. 5 on the Coal River Mining Co.'s property through the Berea grit and it is dry. In the same district the same company's No. 5 on the Bull Creek Coal & Land Co.'s tract is a duster in the same formation. In Carroll district, Lincoln County, L. R. Sweetland has a gasser in the Berea grit at a second test on the W. L. Adkins farm. In the same district, W. C. Kingery's test on the Alexander Wheeler farm is a gasser in the same formation. A. T. Morris completed a test on his own farm. It is a gasser in the Berea grit.

Large Gasser in Logan County

In Logan district, Logan County, the Wacatock Oil & Gas Co. has completed in the Berea grit its test on the Yawkey-Freeman farm. It is a gasser estimated to be good for 14,000,000 feet a day. If as good as reported it is the largest gas well ever completed in Logan County. In Sherman district, Boone County, Godfrey L. Cabot has completed a test on the Blake White farm and good for 126,000 feet. On Triplett Run, Spencer district, Roane County, the Carter Oil Co.'s second test on the J. W. McDade farm is a gasser good for 134,000 feet in the Big Injun sand.

Drilling and Starting Tests

On Straight Creek, Burning Springs district, Wirt County, the Cairo Oil Co.



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When Winter Comes

Regardless of extremes of temperature pulling is not pleasant or profitable; in particular is this true when winter comes. Much pulling and needless replacements may be avoided by using STEELEX BALLS and SEATS in the wells where excessive sand cuts out the ordinary ball and seat in a short time. STEELEX is made to successfully combat such a condition and hundreds of thousands of them are now in use in all oil fields. Your dealer carries them in stock.

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Products that cut down your underground overhead.

has the rig completed for a second test on its own property. On Little Sandy Creek, Elk district, Kanawha County, the United Fuel Gas Co. has rigs up on the Edens and Halstead farms. In Sherman district, Calhoun County, the White Pine Oil Co. has a rig up on the Silas Simmers farm. George Jones and others have moved a drilling machine to a location on the Albert Neely farm. On Flat Run, 1 mile east of Linden Post Office, Smithfield district, Roane County, Douglas Brothers have started to drill on the P. C. Adams farm. In Center district, Wetzel County, the Hope Construction & Refining Co. has a rig up on the O. W. Yeater farm.

In Jefferson district, Kanawha County, the Tampico Oil & Gas Co. has the rig completed for a test on the George C. Weimer farm. In Carroll district, Lincoln County, the Grant Gas Co. is rigging up on the T. S. Nelson farm. In Union district, Marshall County, the Shadyside Oil & Gas Co. struck a pocket of gas at 1,400 feet on the Philip Markey farm. The gas caught fire from the forge and consumed the rig. In Skin Creek district, Lewis County, E. C. Smith & Co. are building a rig on the M. J. Whalen farm. In Grant district, Harrison County, the Hope Natural Gas Co. is drilling at 3,550 feet on the William Burnside farm. In Church district, Wetzel County, the Manufacturers Light & Heat Co. has started to drill on the D. Hostettler farm. The same company has rigged up to drill on the L. Oats farm, in Clay district.

Southwest Pennsylvania

The Manufacturers Light & Heat Co. has completed and abandoned a test on the C. W. Johnson farm, in Center Township, Greene County. In Washington Township, the same company had the same kind of luck at No. 7 on the J. Wright farm. In the same township, the Manufacturers Light & Heat Co.'s No. 10 on the J. W. Closser farm is good for 20 bbls. a day in the Bayard sand.

In Rich Hill Township, Rich Hill Oil & Gas Co.'s test on the Henry Dinsmore farm is dry in all sands and abandoned. In Morris Township, Carnegie Gas Co.'s test on the W. R. McKinney farm is dry and abandoned.

KENTUCKY-TENNESSEE

(Continued from Page 58)

Wallace and Bailey on the Bailey farm, on Smith Creek Branch, was abandoned at 1,800 feet. This attempt was made in an effort to extend the Union Gas & Oil Co.'s production in Lawrence County. The Mid-South Co.'s No. 1 venture at the head of Little Sandy Creek was dry in the Weir, Corniferous and Berea sands. At the edge of the city limits of West Liberty, the Burns Oil & Gas Co. is reported with a duster at 1,850 feet.

Lawrence-Johnson Counties

In District No. 22, of the North Weir Field of Lawrence and Johnson Counties, the No. 6 L. T. Sparks, drilled by Garrison and Townsend, is making 10 bbls. on the jack from the Weir sand.

W. E. Schwartz's trial on the J. H. Ferguson tract, at the head of Blaine Creek, 4 miles east of production, was abandoned as dry at 946 feet.

Magoffin County

In the Licking River district of Magoffin County, the Fych Oil & Gas Co. is reported with two gas wells estimated at better than 250,000 feet each from the Corniferous sand.

Floyd County

The Eastern Carbon Black Co.'s Nos. 3 Kate Spencer and 1 Jack Turner, District No. 21, Floyd County, are reported as light gas wells from the Corniferous sand.

In Wayne County, the Beaver Petroleum Co.'s No. 1 Sherman Morrow, District No. 5, was plugged and abandoned in the Beaver sand at about 600 feet.

Tennessee's New Gusher

Two producers and two dry holes were added to the list of completions in the Tinsley Bottom area of Clay and Jackson Counties, Tennessee, during the time in review. The Dafoe interest brought in its No. 7 Hamp Lynn, 350 feet northeast of No. 2, for 250 bbls. naturally, at 467 feet. The Pencil Cave was topped at 317 feet. On the Draper tract Dafoe's No. 4, offset to Nos. 1 and 2, is a 3-bbl. stripper at 460 feet.

W. J. Gibson, of Louisville, reports that his Nos. 1 and 2 on the Crabtree tract, one-half mile west of the Lynn farm, were both dry at 500 and 510 feet, respectively.

Morgan County

The Russell Producing Co. finished its Nos. 5 and 6 wells in the Sunbright district of Morgan County for 5 and 3 bbls., respectively, at 1,400 feet.

The test for oil which is to be made near Murfreesboro, in Rutherford County, is to be made absolutely upon its own merits, without any waste of time or money, as it is being backed by local capital who want to develop the resources of the county.

SUNBURST CRUDE RUNS TEST LINE CAPACITY

GREAT FALLS, Mont., Dec. 4.—Illinois Pipe Line Co.'s Kevin-Sunburst lines are carrying 13,000 bbls. of oil per day, which is the utmost capacity of the lines at the present time, according to James Lawler, superintendent of the company, who was in Great Falls purchasing camp supplies.

Within 10 days the company will have completed field storage and pumping facilities which will increase the capacity to 20,000 bbls. a day, Mr. Lawler states. He adds that pending completions and the full flow now pinched in will quickly tax the increased capacity.

Mr. Lawler believes that it will not be long until his company will have to tear out its present lines and replace them with a pipe line system costing $1,000,000 and capable of carrying production of from 50,000 to 100,000 bbls. a day.

NATURAL GAS MENACES OKLAHOMA LEAD MINERS

The explosion at the Lucky Jew mine of the Eagle-Picher Lead Co., near Picher, Okla., which cost the life of William Meir, 20-year-old miner, and seriously injured nine others, three dangerously, may herald the existence of a new menace to the life and limb of miners in certain parts of the Tri-State district, according to mining authorities.

The accident was attributed to natural gas which had accumulated in a cave or watercourse. In various parts of the district such caves and watercourses are literally lined with great deposits of rich zinc and lead ores and, when discovered, it is natural for miners to want to explore them.

For these caves to be filled with gas is the unusual thing, but in the field in which the Lucky Jew is located other such death traps may be encountered, it is thought.

Safety lamps such as used in coal mines are being imported into this district and efforts are being made by R. V. Ageton, safety engineer for the Tri-State Zinc and Lead Ore Producers' Association, to spread the use of the lamps among the miners. The lamps are provided with a screen over the flame which will prevent any gas that is present from being ignited. The presence of gas will extinguish the light.

MOTOR TANKERS INCREASE

A consolidated gain in new motor tanker tonnage has been noted during the past year. According to recent computations between 250,000 and 300,000 dead weight tons have been completed or launched, and many of these will be ready to go into commission before the end of the year. An outstanding feature of two of the larger vessels of this type recently turned out is that electrical auxiliaries have been adopted, although steam-driven auxiliaries have heretofore been the rule for oil carriers. The pioneer in this respect is believed to have been the East Asiatic Co., with the 5,000-ton tanker Mexico, completed several years ago, but others have been slow to drop the supposedly safer steam plant.

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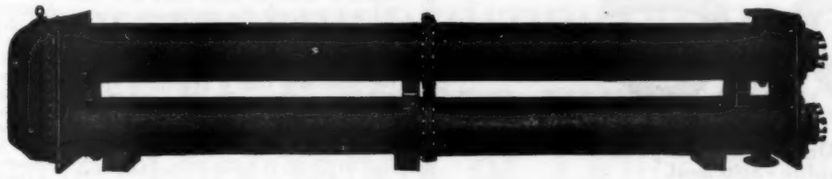

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There are several other practical service advantages that also help to explain the rapidly increasing popularity of this exchanger. Because of its twin arrangement, it is exceptionally compact and easy to inspect, clean, and transport to new locations if desired. All oil connections are at the same end to simplify piping. The construction eliminates expansion strains and likelihood of leakage or breakage.

These advantages and the features of construction of the G-R Mineral Seal Oil Heat Exchanger are explained in leaflet which will be sent on request.

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HUME RETAINS FAITH IN ALBERTA AS LARGE PRODUCER OF CRUDE

By Victor Lauriston

CHATHAM, Ont., Dec. 4.—Prospects for the development of a large production of oil in Alberta have, according to Dr. G. S. Hume, of the Geological Survey of Canada, never appeared more promising than now. This expectation is based particularly on the geological conditions and production in the Turner Valley Field, southwest of Calgary, and in the Wainwright Field, 120 miles east of Edmonton. Many areas on the plains and foothills have been drilled, and in a number of places large gas fields have been developed, but outside of the Turner Valley and Wainwright fields no commercial production of oil has yet been secured in Alberta proper, although numerous shows of oil have been found.

Oil was discovered at Wainwright in the fall of 1923 when British Petroleums, Ltd., struck a flow variously estimated at 100 to 200 bbls. a day in their No. 2 well. Oil was also struck in 1924 in No. 4 well of British Petroleums, Ltd., which was drilled on the same section a short distance northeast of No. 2. The oil in both wells was heavy and production trouble has been encountered, but several carloads of oil have been shipped. Well No. 3 was drilled about a mile southeast of Nos. 2 and 4 in 1924, and an oil sand was struck at a deeper horizon than that of Nos. 2 and 4. This well was abandoned on account of production troubles, but in 1925 well No. 3-A, located close to No. 3, was drilled and came in with a pumping capacity of 50 to 75 bbls. a day. The oil in this well is of a much better quality than that in Nos. 2 and 4, and the well has been finished off in good shape so that no production troubles seem likely to develop.

Dr. Hume's Theory

The question has arisen as to the possibilities of oil production from this deeper sand in other parts of the Wainwright structure. Gas is the propulsive force that causes oil to flow to a well. If other wells should be drilled on another part of the Wainwright structure where there is the same degree of oil saturation in the deeper sand as in No. 3-A well and where a much higher gas pressure exists, much larger oil wells might reasonably be expected. It is a recognized fact that No. 2 well particularly contains much more gas than No. 3-A well, but it is not known whether the deeper sand at No. 2 well location contains more gas than it does in No. 3-A well, neither is it known whether the same sand that is productive at No. 3-A will be present at the No. 2 well location, since sands frequently show strong lensing with small lateral extent. However, from the amount of information at hand at present the best location to test the possibilities of the deeper sand would be close to British Petroleums No. 2 or No. 4 wells and it is understood a company interested in the Wainwright Field is already contemplating the drilling of such a well.

The Turner Valley Field

The Turner Valley or Sheep Creek Field has been making a small production of light oil for several years. This field has been the scene of greatly increased activity since the striking in the fall of 1924 of a tremendous flow of wet gas in the Royalite Oil Co. No. 4 well at a depth of 3,740 feet. The well cannot be completely shut in as the casing will not withstand the tremendous pressure that would develop. The gas is, therefore, allowed to flow at the rate of 17,000,000 feet a day. Two separators to extract gasoline from the gas have been erected on the pipe line and during the first six months of this year the well produced 423 bbls. of gasoline a day. The production of oil for the months of May and August exceeded the monthly production from January to April. Both oil and gas contain hydrogen sulphide. The gasoline is treated in the Imperial Oil, Ltd., refinery at Calgary, and a scrubbing plant to treat the gas is under construction.

At the present time several wells are being drilled in the Turner Valley Field. The Royalite Oil Co. is drilling two wells, No. 5 and No. 6. No. 5 well is slightly north of No. 4 and the latest information available from Imperial Oil, Ltd., gives its present depth at 2,152 feet, with the 12½-inch casing at 1,544 feet. No. 6 well is about 1,466 feet deep with the 12½-inch casing set at 1,224 feet. In this last well a show of oil and gas was obtained at 1,330 feet. Besides these wells, the Vulcan Oils, Ltd., and Macleod Oil Co. are making good progress and several other wells have been started and are drilling.

The horizon from which the wet gas is being obtained in the Royalite No. 4 well is a dolomite. This dolomite is overlain by several hundred feet of hard limestones, which quite effectively seal in the oil in the reservoir rock below. The structure of the Turner Valley Field is a sharply folded anticline about 2 miles wide and of unknown length. Due to the sharpness of the anticline the oil horizon of Royalite No. 4 well will be encountered at different depths in the various wells now drilling, according as the wells are located near the crest or on the flanks of the anticline, but it is thought all the wells will have to drill as deep if not deeper than No. 4 Royalite before the productive horizon is reached.

The discovery of oil in the deep dolomitic rock in No. 4 Royalite well leads to the hope that in other parts of the foothills this same porous horizon will be found in structures suitable for the accumulation of oil. The rocks on the foothills are much folded and faulted and much detailed geological work will be necessary before suitable structures can be outlined. However, the discovery of oil in the Royalite well has given a great impetus to the search for other favorable oil locations and undoubtedly a great deal of exploratory work will be attempted in the near future.

Work at Medicine Hat

Tests for oil are being made in other parts of Alberta, states Dr. Hume. At Medicine Hat the Roth well is now being drilled and it is hoped to make a deep test. Medicine Hat-Redcliffe area has produced a large amount of gas, which is used for commercial and domestic purposes. The original pressure in the gas wells in this area was somewhat higher than what would be anticipated from calculations based on the depth of the producing gas horizon, and this has led to the hope that the excess pressure is due to migration of gas from a lower horizon. Thus the Roth well will be a test that will be watched with much interest.

Due to the finding of oil in the Kevin-Sunburst Field of Montana, close to the international boundary, the last few years have witnessed much drilling activity in southern Alberta in the vicinity of Coutts. No commercial oil wells have yet been found. Imperial Oil, Ltd., is drilling a test at Rice Creek in the foothills south of Turner Valley, and another well at Coalspur in the north. Neither of these wells is yet complete. Other wells have been drilled within recent years in various parts of the plains, but without finding oil in commercial quantities.

NEW BRITISH OIL LAW

The Cabinet is considering a proposal by the Home Secretary (Sir William Joynson-Hicks) to introduce before Christmas a bill amending the Petroleum Acts of 1871 and 1879, according to the Evening Standard, of London, England. This bill seeks to give the Home Secretary authority to make regulations respecting the handling of petroleum at docks and depots, and the transport of it by road and rail. A precise definition would be given to the term "petroleum spirit," and for the purpose of carriage and accident injuries the spirit would be brought within the provision of the Explosives Act.

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CENTRAL WEST

(Continued from Page 58)

same county, Otto Brown's No. 6, 60 feet from the north line and 600 feet from the west line of the Frank Rogers farm, Section 28, pumped 5 bbls. Top of sand at 1,206 feet and drilled 35 feet in. In Lake Township, same county, Lentz, Schultz and others' second well, 200 feet from the south line and 600 feet from the west line of the Mrs. Hattie Krummel farm, Section 26, is good for 3 bbls., with sand at 1,273 feet and down 23 feet in the sand.

The Paulding County Field will naturally go forward now, and there are many new faces seen in the Payne Field. J. H. Harmon, a well-known Mansfield, O., operator, is looking over his production with a view of doing additional development work. H. L. Ogle and W. H. Wigton, of Newark, O., plan extensive operations to the northwest of Payne toward the Maumee Township, Allen County, Indiana, development near the State line, where they have recently installed a power pumping plant. Reports are that officials of the Buckeye Pipe Line Co., from Lima, were in the Payne Field recently, arranging for the extension of the field line westward to the Gerber Pool, across into Indiana.

Indiana

In the past few days considerable attention has been attracted to the Ledford extension of the Payne Field, the main part of which lies in Paulding County, Ohio, and it looks as though a quite prominent field may be developed, extending into Indiana. Cochran, Schumacher & Knerr have completed their second test on the J. H. Gerber farm, in the southeast quarter of Section 16, Maumee Township, Allen County, and about 1 mile northeast of Woodburn, Ind. Sand was struck at 1,443 feet and drilled 55 feet in. Before given a shot a test was made which showed 87,000 feet of gas and after the shot it increased to 300,000 feet, and the well stood 800 feet in oil with no water. The well produced 20 bbls. the first pumping, and the supposition is that they have an excellent well of higher gravity crude than that in the Payne Field, across the State line. No. 3 will start at once. Mr. Gerber, the landowner, is a former Illinois farmer, and there is no doubt but what he holds some commercial producing oil property. The producing firm expects to incorporate under the name of the Schuran Oil Co. The firm has just closed a deal for a lease on an 80-acre tract near the Gerber wells, giving the owners a block of 400 acres to develop.

To the north of the Gerber wells, Estes, Morrison & Couch are drilling a wildcat on the William Kammyer farm, Section 9, same township, and north of the Maumee River. The well is located in what is known as the Horseshoe Bend.

In Clay Township, Pike County, A. B. Bements' No. 3, on the Claude Loveless lease, in Tract 121, showed a production of 15 bbls.

In Barton Township, Gibson County, J. H. Young and others' No. 4 Harmon Barrett farm, Section 6, pumped 10 bbls.

In Veale Township, Daviess County, Maple Oil Co.'s second well, on the John Peek farm, is rated as good for 25 bbls. The Maple Co. consists of Parrott Brothers and others.

Illinois

Illinois fields failed to show but one completion during the week and that was in the Stillwell Pool, drilled by the Adams Corner Oil Co., No. 3 Mack Madden farm, Section 18. This well, coming in a duster, was quite a surprise to the talent, being so handily located to big producers. Same company is drilling Nos. 4 and 5, same farm, but in Section 7.

Central Ohio

Only two wells were brought in in the Central Ohio fields during the week. The Pure Oil Co.'s No. 2 Margaret Miller farm, Section 18, Prairie Township, Holmes County, showed 5 bbls. The other completion was a fair gas well by the East Ohio Gas Co., in the southwest corner of the Amos Stroskopf farm, Section 3, Liverpool Township, Medina County.

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CALIFORNIA FIELDS

(Continued from Page 56)

sponsible for the only production added in the Ventura Avenue Field this week by recompleting No. 8 Notten after redrilling and deepening it to 4,826 feet. The well started off making 1,190 bbls. of 29.8 gravity oil which cut 2 per cent. It is flowing through a ⅞-inch bean under a pressure of 340 pounds. The Associated Oil Co.'s No. 101 is perhaps one of the most interesting wells being drilled in the field at present and, although it is down 4,540 feet, it has not yet found any thing of interest. It still has, however, another 300 feet to go before causing any anxiety over the outcome. The company unluckily ran into a fishing job in No. 12 Lloyd, while going ahead a short time ago at 4,903 feet and it looks as though the fish is there to stay. No. 21 Lloyd, which has been showing all kinds of life at 5,280 feet, is being reamed preparatory to running in the oil string. The Shell Oil Co. is starting some now wells on the Edison, Gosnell and Taylor leases, but it will probably be several months before they are completed. There are at present, however, two drillers on each lease which should be on production within a comparatively short time. No. 1 Hobson of the Chanslor-Canfield Midway Oil Co., an outpost, is down 3,225 feet and going ahead steadily in a hard sandy formation. E. J. Miley has reached a depth of 3,655 feet in his No. 1 Casitas on Red Mountain, but so far the indications have been rather discouraging. Hoyt S. Gale's No. 1 Beardsley, which is rotating ahead steadily at 3,365 feet, in a hard sandy shale, is also devoid of any favorable indications. The Standard has just started work on its first diamond core drill hole on the Argabrite lease and, since several such survey holes will be drilled, it will probably be several months before the first deep test reaches a depth sufficient to be of interest, as the rainy season is bound to slow up work somewhat.

Southern California Wildcats

Judging by the present status of No. 1 Bixby of the Marland at Seal Beach, there is only a slightly possibility of developing production in the northwestern end of this field where this well is located. The formation at 4,840 feet is a sandy brown shale and the project does not seem to be showing anything more than nearby tests on the Shell's Bryant lease. No. 1 Bryant of the latter still continues to produce 35 bbls. of oil and 1,800 bbls. of water and, although this production has been the direct cause of all of the work in the area, no other well has yet been able to get anything better than a slight showing. The Shell Oil Co. has already abandoned No. 3 Bryant and is plugging back No. 2 by stages from 6,139 feet in an effort to overcome water trouble before testing out a few upper showings. The Oak Ridge Oil Co. has definitely decided to abandon its wildcat at Bandini at 5,083 feet. This marks the fifth duster drilled in this area by the Oak Ridge, not to mention several others by the Wilshire, Bandini and Superior Oil Co. The Bandini Petroleum is still going ahead with one well, No. 4 DeBaker, and will probably go to at least 5,000 feet before pulling out, as it is now at 3,840 feet.

No. 1 Vail of the Superior at Belvedere was logged yesterday afternoon in a hard sandy shale at 5,023 feet and, although there have been rumors to the effect that some slight showings have been encountered, the field superintendent stated positively that there had not yet been a showing worth considering. The Superior's land department was unusually successful in tying up this acreage and it is quite possible that another test will be made some distance away before releasing the acreage. The Shell is still held up with mechanical trouble in No. 1 Menchago, north of Brea Canyon, at 435 feet and no recovery was made during the week. The Elbe Oil Co. suspended work on its Culver City test west of the Inglewood Field at 5,055 feet and an abandonment notice is now being prepared. The Pan American spudded in its No. 2 Pacific Southwest at El Segundo early in the week and is at present down 460 feet. This wildcat is considered a rather long shot, but worthy of being drilled, as the area has not been thoroughly tested. W. E. Garner discontinued drilling on his Keystone well east of Torrance at 690 feet and, instead of making a deep test, will drill another shallow hole a few locations north of No. 1.

Another wildcat is getting under way in the Saugus district, north of Newhall, which has developed into one of the most popular districts for oil exploration during the past few months. The new well is to be drilled by the Marland Oil Co. on the Behring property, about 3 miles north of the Union Oil Co.'s test, which is at present standing suspended at 2,970 feet. The Marland Oil Co. has been actively leasing in this area for several months and has signed up considerable acreage in an area which geologists assert shows surface indications of a well defined anticline. The Marland is the third large company to start wildcat operations in this district. The Union Oil Co. was the first, followed by the Associated Oil Co. and Milham Exploration Co. The Union has temporarily suspended work, but the Associated abandoned its test as a dry hole at 5,582 feet. The Milham's No. 1 Conroy is at present just getting under way at 1,600 feet. A. T. Jergins is still held up with mechanical trouble in his Palos Verdes test, but the Petroleum Securities Co. is making preparations to land a protective string in its hole 2 miles away at 3,730 feet. In the Santa Ana Gardens area the Standard Oil Co. is cleaning out its No. 1 Von Schriltz and going ahead in No. 1 Plavan in the blue shale at 1,700 feet. No. 1 Von Schriltz of the Shell, a mile or two away, is rotating ahead in a sandy shale at 3,300 feet.

Northern California Wildcats

The Chanslor-Canfield Midway Oil Co. is bailing its wildcat at Delano, but the best that has been found to date is a little oil and considerable water from 3,804 feet. The Standard made a test of its well north of Lost Hills in Section 12-25-19, but the showings found at 4,048 feet were not sufficient to result in production and the bit is accordingly being pushed ahead. The company also made a test of its No. 1 Weston on the McKittrick front in Section 25-29-21 from the 4,900-foot level, but this test, too, was unproductive. The Main got a few rainbows at 3,450 feet in its second Wasco wildcat in Section 28-27-24 and, while this indication was considered quite favorable, no pronounced sand was found. It looks as though it will be but a short time before the Associated abandons its Kerman wildcat in Section 35-13-26, as the hole is pretty well junked at 5,740 feet. The outlook from a production standpoint is also unfavorable and it is not believed that very much more time will be spent on the project.

The General Petroleum Co. has started plugging back its wildcat in the Kettleman Hills, Section 28-22-18, but will probably start another hole before pulling out, if the upper showings in this test are unproductive. In Section 12-23-18, the Associated is drilling ahead in a sandy blue shale at 1,525 feet. The Bolsa Chica Oil Co. got a few gas bubbles at 1,350 feet, but did not stop drilling and is now making hole at 1,610 feet. The Marland is getting quite deep in Section 12-22-17, but the bit, now at 5,472 feet, will undoubtedly be pushed ahead to around 6,000 feet, as the entire Kettleman Hills area is considered deep territory. The General Petroleum has not yet finished rigging up its two tests in San Luis Obispo County, but should complete all preliminary work within the next week or 10 days.

H. N. Witt's Petaluma test, No. 2 Ducker, in Sonoma County, 40 miles north of San Francisco, was given a test during the early part of the week and made about 20 bbls. before sanding up. The hole was carried down to 1,425 feet, but plugged back to 1,020 feet, from which depth the test was made. Witt reports a 25-foot sand, but it was a rather lean one and for this reason prac-

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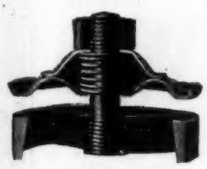

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tically no hope is held out for the completion of this well as a commercial producer. Subsequent development work may, however, make the territory look better, notwithstanding the fact that geologists are somewhat skeptical over the outcome.

The Associated Oil Co. has just spudded in its Monterey County test in Section 2-20-6, but will, it is reported, drill ahead very slowly. The Harriman-Jones Oil Co., in Section 20-19-6, is cleaning out its 4,003-foot hole preparatory to deepening, as a pumping test only showed a small amount of oil. The Hub Oil Co. is abandoning its activities in Tulare County and, although its No. 2 Andrews had a slight showing of oil, water trouble prevented completion.

NORTH LA.-ARKANSAS

(Continued from Page 42)

Section 27-22-15; waiting for standard rig to pump at 1,082 feet in No. 2 Worley, Section 23-22-15; Henderson and others are drilling at 1,800 feet in No. 1 Waldwell, Section 29-22-15; Shawmut Petroleum Co. set 10-inch at 98 feet, drilling at 600 feet in No. 4 Jolly, Section 22-22-15.

In the Oil City district, Bratcher and others are drilling at 1,895 feet in No. 1 Files, Section 10-20-16; Fortuna Oil Co. is drilling in lime at 3,968 feet in No. 2 Levee Board, Section 8-20-15.

Four miles west of Cross Lake, the Fortuna Oil Co. has drill stem stuck at 4,329 feet in No. 1 Mitchell, Section 17-18-16.

Haynes Brothers set 10-inch at 100 feet, drilling at 900 feet in No. 2 Louisiana Live Stock & Plant Co., Section 4-19-16, about 4 miles southwest of Mooringsport.

In the old Caddo Field, the Gulf Refining Co. is moving in rig for No. 223 Ferry Lake, Section 16-20-16, and building derrick for No. 224 Ferry Lake, Section 20-20-16; Standard Oil Co. set 10-inch at 157 feet in No. 175 Stiles, Section 27-21-16.

W. J. Stauffer has derrick up for No. 1 Starcke, Section 17-23-16, formerly reported as Chicca Oil Co.'s No. 1 Starcke.

Caldwell Parish

Potts & Crickett, trustee, are waiting 8-inch casing at 1,300 feet in No. 1 Gore, Section 33-12-3e, half way between Columbia and Urania.

Claiborne Parish

Clark & Melat are drilling in sandy shale at 2,795 feet in No. 1 Heard, Section 5-21-6, 4 miles northwest of Homer.

J. P. Evans, is moving in rig for No. 1 Mrs. P. L. Boatner, Section 10-19-5, 7 miles north and a little east of Arcadia.

Triangle Drililng Co. has set 12-inch at 100 feet in No. 1 Baker, Section 13-19-6, 5 miles north of Arcadia.

Catahoula Parish

Ferguson & Kimbrough Oil & Gas Co. is drilling at 1,800 feet in No. 1 Nichols, Section 31-9-6e, and Alexander and others have derrick up for No. 1 Cruse, Section 6-11-4e.

DeSoto Parish

Bentley and others drilled plug and are blowing gas at 2,310 feet in No. 1 Hewitt-Ricks, Section 10-11-14, in the old Spider district and 7 miles southwest of Mansfield.

Dixie Oil Co. is drilling in lime at 3,022 feet in No. 1 Jenkins, Section 9-12-11; The Texas Co. is drilling in chalk rock at 1,362 feet in No. A-9 Wemple, Section 9-12-11, both in the old Naborton Field.

Gulf Refining Co. has shut down and is repairing rig at 5,439 feet in No. C-18 Willis-Williams, Section 31-13-11, and set 8-inch at 107 feet, arranging to set 6-inch at 736 feet in No. A-33 Jenkins, Section 4-12-11, south of Bayour Pierre Lake and on the edge of the Naborton district.

Five miles east of Logansport, the Fortuna Oil Co. has shut down at 4,114 feet in No. 1 Alexandria, Section 32-13-15.

LaSalle Parish

Alexandria Urania Oil Co. is reaming to set 8-inch at 1,566 feet in No. 1 Urania, Section 19-10-2e, about 1 mile south and a bit west of Urania.

Ayers and others have derrick up for No. 2 Urania, Section 13-10-1e, 2 miles west of Urania. Three miles south of Urania, Beckman and others have derrick up for No. 3 Urania, Section 25-10-1e.

Dixie Oil Co. is rigging up to drill No. 1 Urania, Section 24-10-1e.

Dowling & McMurray tested fresh water at 924 feet, cemented 8-inch at 920 feet, now drilling at 965 feet, corrected depth, in No. 1 Holloway, Section 28-11-2e, 4 miles north of Urania and 2 miles west of Olla.

Dickinson and others have made location for No. 1 Sanders, Section 27-10-1e.

Keene & Woolf Oil Co. cemented 8-inch with 200 feet of 6-inch on bottom, sealed and set 8-inch at 1,548 feet in No. 1 Urania, Section 19-10-1e, offsetting discovery well.

Louisiana Oil & Refining Corp. set 6-inch at 1,565 feet in 4 feet of sand, drilling at 1.574 feet in No. 1 Tremont, Section 30-10-2e, 2 miles south of discovery well.

Cleve Love set 6-inch at 1,500 feet in 2 feet of sand, drilling at 1,510 feet in No. 1 Doty, Section 36-10-1e, half way between Jena and Urania.

Natural Gas & Petroleum Co. has derrick up for No. 1 Tullos, Section 25-10-1e, and Ohio Oil Co. has derrick up for No. 1 Urania, Section 24-10-1e.

Urania Petroleum Co. set 8-inch at 959 feet in No. 10 Urania, Section 19-10-2e, 1 mile south of Urania.

Six miles southwest of Olla, J. P. White is drilling at 200 feet in No. 1 Louisiana Central Lumber Co., Section 27-10-2e.

Zeigen and others have set 10-inch at 60 feet in No. 1 King, Section 13-10-1e.

Morehouse Parish

United Carbon Co. is drilling at 1,400 feet in No. 1 Gray, Section 16-20-5.

Sabine Parish

L. M. Emlet is drilling in shale at 3,305 feet in No. 6 Bewman-Hicks Lumber Co., Section 8-7-12, 7 miles northwest of Many.

Toro Petroleum Co. is down 1,500 feet in No. 1 Pickering Lumber Co., Section 24-5-12, 12 miles south of Many.

Arkansas Wildcats

Bradley County—Gulf Refining Co. is drilling in sand at 3,290 feet in No. 1 Benson, Section 25-15-9, half way between Warren and Hamburg.

Calhoun County—Magnolia Petroleum Co. is drilling at 3,000 feet in No. 1 Calion Lumber Co., Section 29-15-14, 6 miles north of Smackover production.

Clark County—Virgil Heath is fishing for 6-inch, did not get casing set at 838 feet in No. 1 Arnold, Section 12-9-20, 4 miles northeast of Gurdon.

Wheeten Oil Co. is drilling at 850 feet in No. 1 Brown, Section 35-10-20.

Cleveland County—Simms Oil Co. is drilling at 2,361 feet in No. 1 Mosley, Section 19-10-11, 8 miles east of Fordyce.

Columbia County—Hude & Aarnes are drilling in red shale at 2,630 feet in No. 2 Brown, Section 13-15-20, in the Stephens Field.

Magnolia Petroleum Co. set 6-inch at 2,020 feet in No. 5 Reinhart, Section 36-15-20.

Natural Gas & Petroleum Co. has shut down and is repairing rig at 2,852 feet in No. 1 Hays, Section 30-19-18, 12 miles northeast of the Springhill district.

Pluto Oil Co. set 8-inch at 900 feet, drilling at 1,000 feet in No. 2 Robinson, Section 23-18-23, 10 miles northeast of Bradley.

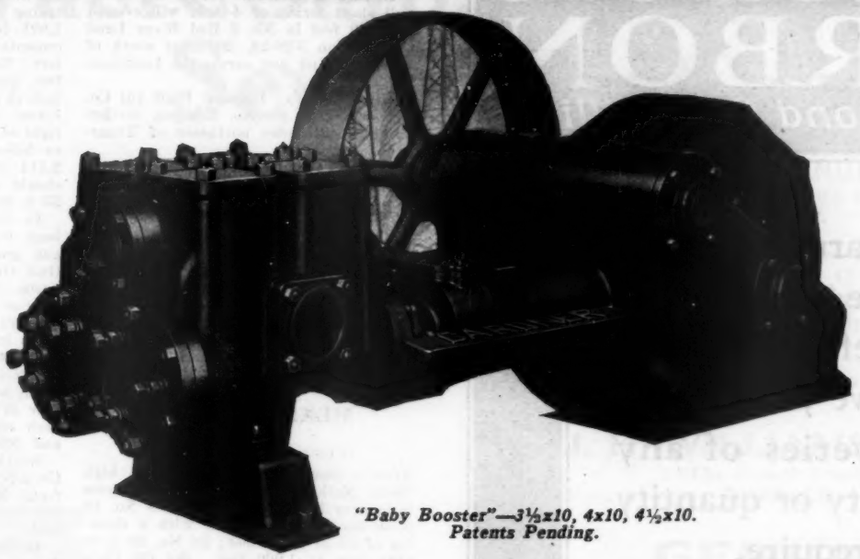
Dallas County—McNeil and others are coring at 1,930 feet in No. 1 Owens, Section 29-10-16, 16 miles west of Fordyce.

Hempstead County—Burton and others are drilling in lime at 960 feet in No. 1 Garland, Section 23-10-25.

C. W. Robinson has derrick up for No. 1 Tones, Section 29-12-23.

Lafayette County—Arkansas Fuel Oil Co. put on beam in 7 hours pumped 250 bbls., approximately 15 bbls. 25 gravity oil at 2,784½ feet in No. 1 Allen, Section 18-19-24, 2 miles east of Bradley.

Humble Oil & Refining Co. set 4-inch



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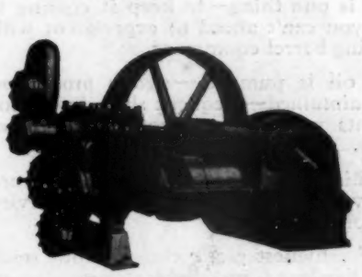

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at 2,412 feet in 8 feet of sand, drilling at 2,428 feet in No. 1 Reed Bodcau, Section 16-15-22, 15 miles west of the Stephens Field; is rigging up to drill No. 1 Knighton, Section 3-16-22, about 10 miles northeast of Lewisville.

Kensaw Petroleum Co. is trying to pull short string of 4-inch, will cement at 2,840 feet in No. 2 Red River Land Co., Section 3-20-24, 20 miles south of Lewisville and just across the Louisiana line.

Miller County—Buzzard Bluff Oil Co. has derrick up for No. 1 Munn, Section 22-14-26, 12 miles northeast of Texarkana.

Nevada County—Brewer and others are drilling in gummy shale at 2,214 feet in No. 1 Lister-Holten, Section 22-14-20, 3 miles north of the Stephens Field.

Greason and others are waiting casing at 1,190 feet in No. 1 Ellis, Section 2-14-21, 19 miles north of Magnolia.

Magnolia Petroleum Co. is drilling in shale at 3,590 feet in No. 1 B. F. Johnson, Section 3-15-21, 13 miles north of Magnolia and 6 miles west of the Stephens Field.

MEXICAN FIELDS

(Continued from Page 42)

After a long shut down, owing to high water, National Oil Co.'s No. 14 Chijoles is in gray lime at 1,655 feet; its No. 18 is in the same formation with a showing of oil at 1,875 feet; its No. 19 is in gray lime at 1,960 feet. Sol Oil Co.'s Federal zone tests Nos. 5 and 7 Tampusol, in the Tampuche sector, have cemented 8-inch in gray lime at 1,629 and 1,585 feet, respectively. Tampascos Oil Co.'s No. 11 and No. 12 Robles are 1,530 and 1,400 feet in gray lime, respectively. Transcontinental Petroleum Co.'s No. 6 Piedras is in gray lime with an oil showing at 1,735 feet.

Cacalilao

In the Cacalilao sector of the northern fields, drilling operations as the week ended are best reflected as follows: International Petroleum Co.'s operations in Lot 5 follow: No. 236 is in gray lime at 1,785 feet; No. 237 is in the same formation at 1,640 feet; No. 239 is in white lime at 2,238 feet; No. 241 has cemented 8-inch in the Sam Felipe at 1,246 feet; Nos. 246 and 248 are drilling in gray lime at 1,570 and 1,640 feet, respectively; No. 249 is fishing in gray lime at 2,178 feet; No. 251 is in gray lime at 1,600 feet; No. 252 is in red rock at 240 feet; No. 254 is spudding; No. 255 has cemented 8-inch at 1,198 feet in gray shale; No. 256 is in blue shale at 314 feet. Mexican Petroleum Co.'s No. 20, Lot 1 Cacalilao, has cemented 8-inch in gray lime at 1,255 feet. La Corona Petroleum Co.'s No. 175, Lot 4, is in shale at 60 feet. Transcontinental Petroleum Co.'s operations in Lot 4: No. 206 is spudding; No. 232 is in gray lime at 1,890 feet; No. 234 is in gray shale at 625 feet; No. 239 has cemented 8-inch at 1,255 feet in the San Felipe; and in the Paciencia, just north of Cacalilao, its No. 47 is in shale at 500 feet; its No. 55 is in gray lime at 1,785 feet.

South Fields

In the South Fields, Huasteca Petroleum Co.'s No. 30-A Cerro Azul is in blue shale at 665 feet; its No. 70 is in brown shale at 1,335 feet. Down in Tierra Blanca its No. 54 is in blue shale at 80 feet; its No. 57 is in the same formation at 830 feet. Up in Casiano, its No. 15 is in basalt at 445 feet. International Petroleum Co.'s No. 32 Toteco is running 10-inch in shells at 1,710 feet, and its No. 7 Agua Nacida is in hard shale at 3,878 feet. Mexican Sinclair Petroleum Corp.'s No. 15, Lot 226 Amatlan, is in soft shale at 1,160 feet. Mexican Eagle Oil Co.'s No. 35 Furbero is in a hard sand at 2,396 feet, the status of its other south fields tests remaining unchanged since the last report. Transcontinental Petroleum Co.'s No. 7, Lot 17 Zacamixtle, is drilling in gray shale at 1,300 feet.

Northern Miscellany

In the Ebano Field, in the northern district, Mexican Petroleum Co.'s operations follow: In Chapacao, No. 41 is in gray lime at 1,248 feet; No. 44 is in the same formation with the hole full of oil at 1,600 feet; No. 45 is in lime at 2,387 feet with some salt water showing, but it continues drilling; No. 47 has cemented 8-inch at 1,110 feet in gray lime. In the Chijol sector, No. 35 continues trying to straighten crooked hole at 1,921 feet in brown lime; No. 37 has cemented 8-inch in gray lime at 1,255 feet; No. 40 is in gray lime at 2,081 feet, and No. 8 Mendez has cemented 8-inch in gray lime at 1,268 feet. National Lines' operations through the Ebano right of way (Chapacao) is best reflected as follows: No. 21 is in gray lime at 2,114 feet with an oil showing. It should come in at any screw, and No. 25 is drilling in gray shale at 1,070 feet.

In the Corcovado, La Corona Petroleum Co.'s No. 17, Lot 6, is in brown and gray lime at 1,840 feet. Mexican Gulf Oil Co.'s No. 21-A Chapacao, just north of Corcovado proper, is in gray lime at 2,138 feet; No. 22 is in brown and gray lime at 2,128 feet, and its No. 23 is in gray lime at 1,348 feet.

In the Marland Field, Cia. Pet. Franco Espanola's No. 26 Limon is in gray shale at 340 feet; No. 37 is in gray lime at 1,447 feet; Nos. 40 and 41 have each cemented 10-inch in shale at 507 and 500 feet, respectively.

In the Topila district, Ita Mex Oil Co.'s No. 20 La Mula is in shale at 700 feet. Manson and others' No. 3 Tobalo has cemented 6-inch in gray lime at 1,580 feet.

In the Los Esteros district, American International Fuel Co.'s No. 20 is in gray lime at 1,368 feet.

At El Naranjo, northwest of Ebano, International Fuel Co.'s No. 8 is in black chert at 2,267 feet.

At Caracol, Venable and others' No. 31 is in gray shale at 1,055 feet.

SOUTHWEST TEXAS

(Continued from Page 44)

200 feet in the No. 1 Bridges, a showing encountered all through that territory in other wells.

Duval County

United States Gas & Oil Co.'s No. 1 Peters in Duval County bailed dry at 2,137 feet after setting 8¼-inch casing. The well is shut down, but will probably be drilled deeper. It is north of the Cole gas field. The same company's test on the Smith-Corkhill ranch has not spudded in yet. Rig is being moved in. Co-Operative Drilling Co.'s No. 2 Dinn has been temporarily abandoned. Associated Oil Co.'s No. 1 Southerland is coring sandy shale at 2,736 feet. Humble Oil & Refining Co.'s No. 1 Woods, in the northern part of the county, has been abandoned at 2,137 feet and the company is setting up on No. 1 Haight, in Survey No. 2, 300 feet north of the south line and 300 feet west of the east line.

Fayette County

Machinery is being moved in for No. 1 Harris Green, 3 miles west of Weimer, near the east fork of the Navidad River, and the Southern Pacific Railroad.

Milam County

Elbert Williams of Corsicana has purchased the Fritz Fuchs' 10-acre Roark lease in the Rockdale shallow field with four producing wells for a consideration of $21,000 cash and the Baggett Brothers' 24-acre Roark lease for $30,000. W. C. Jennings, who owned a one-sixth interest in the Hennings Oil Co., which operated in the Rockdale Field and owned the Branch lease with five producing wells, has sold his interest to Yoakum, Texas, parties. Terms of the sale have not been made public.

Live Oak County

Plateau Oil Co. and Texas Pacific Coal & Oil Co.'s joint test in southern Live Oak, No. 3 Freeman, was tested at around 2,200 feet, or below, but failed to make a well. Gas in No. 2 Freeman and No. 1 Collins was encountered at about 2,390 feet and No. 3 Freeman will be drilled deeper on the supposition that sand tested is not the gas sand.

McMullen County

Mission Oil Co.'s No. 1 Washburn in western central McMullen County is in a sand at 1,900 feet and will set 8¼-

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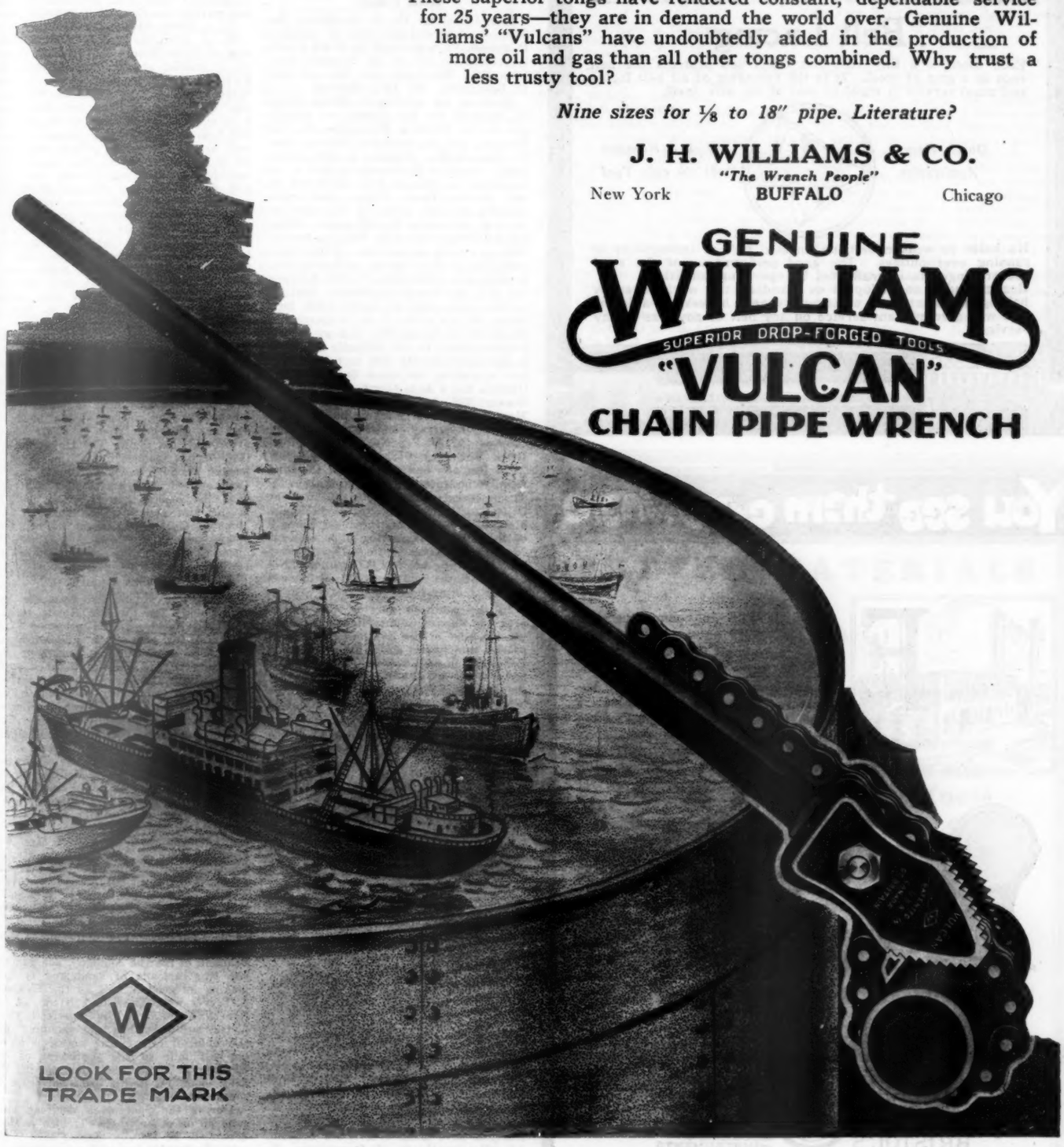

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inch casing and make a test. The casing is being set more because the hole was caving than on account of any showing though the bottom of the hole is in sand. The 8¼-inch casing will permit the deep test intended.

Nueces County

The Texas Co. has spudded in its No. 1 R. Driscoll in Nueces County, 6,600 feet from the west line and 1,650 feet from the south line.

Starr County

Dauchy & Bryant's No. 1 Kelsey in Starr County is drilling below 1,100 feet.

Val Verde County

Plateau Oil Co. is arranging to drill on the Harrison tract in Val Verde County, 6 miles east of Del Rio. Cable tools will be used.

Webb County

Cole Petroleum Co. is completing the first two of several gas wells in the Cole Petroleum Co.'s gas field in Webb County, contracted for to the Houston Pipe Line Co. The wells are Nos. 11 and 12 Benavides. No. 10 is drilling.

Much of the activity in Webb County inspired by the activity to supply gas to the Houston Pipe Line Co. for Houston and the Southern Natural Gas Co. line to San Antonio is now under way. Snowden-McSweeney's No. 1 de la Garza, on Survey 682, northwest of the Carolina-Texas Field, after sidetracking the two joints of liner lost in the hole, is back to the old depth. Johnson & DeTray's No. 1 M. Vela, on Survey 1012, is setting up machine. Cling Chenault's No. 1 de la Garza, on Survey 681, is drilling at 1,200 feet. O. W. Killam's No. 1 J. M. Garcia, on Survey 1101, is in lime and shale at about 1,500 feet. Bordo Oil Co.'s No. 1 de la Garza, on Block 46 of Survey 48, is down a few hundred feet. O. W. Killam's No. 1 de la Garza, on Survey 336, at below 1,600 feet is waiting for water line. Morgan-Gibble's No. 4 de la Garza, in Block 4 of Survey 336, is drilling at 1,200 feet. Morgan-Claggett's No. 1 de la Garza, on Block 6 of Survey 336, is moving in machinery. M. O. P.'s No. 2 de la Garza, Block 9 Survey 678, is drilling below 2,025 feet and had not reached the sand usually encountered at around that depth. The log seems to indicate a dip of about 20 feet to the mile. Seagraves & Moody-Morgan's No. 3 de la Garza, on Block 9 of Survey 681, is moving in machinery. No. 1 de la Garza, on Block 15 of Survey 336, is drilling below 1,600 feet and No. 2 de la Garza, on Block 11 of Survey 681, is drilling below 600 feet.

In the southern part of the county near the Zapata County line and in the western edge of the Aviators Pool, Kirkpatrick and others are drilling in No. 1 Bruni, on Survey 835, at 1,642 feet. It is an effort to pick up an extension of the Mirando Field to the south, there being a 5-mile gap between the Aviators and Mirando Valley Pools.

Keene and others, on Block 15 of the Bruni tract, south of the Aviators Pool, is drilling at around 1,500 feet in shale and will be ready to test in another week. Rydal Oil Corp.-Crown Central Petroleum Corp. have set at 1,728 feet in the No. 2 Bruni, on Block 14, and due south of the Aviators Pool. George M. Ball is completing his No. 7, on Block 73 of the Edgington subdivision of the Puig Brothers survey, and also No. 1, on Block 74 of the same survey. Both are being bailed and will be oil wells. Seagraves & Moody have abandoned No. 1 Laurel, on Survey 719, midway between Mirando City and the Carolina-Texas gas field. Depth was 2,028 feet. A. R. Marts and M. Arronson are preparing to spud in on Survey 602 of the Reiser land, east of the town of Reiser and east of the old Reiser gas well. E. R. Marts will drill north of the test he recently completed south of Reiser, on Survey 1568. The test got a little oil and it is believed is too low down on the structure. The next test will be nearer the town of Resier and on Survey 1617.

Williamson County

Groneman & Brothers, drilling contractors, have taken over No. 1 Schram, 12 miles southeast of Georgetown, in Williamson County, and are drilling below 1,950 feet. It was started by Guiler, Smith & Jarman.

Zapata County

The Texas Co. is rigging No. 2 Jennings in Zapata County, 500 feet west of its No. 1, that was plugged and abandoned after a bad blow out of gas that killed the driller. The next test is 3,650 feet from the northwest line and 1,388 feet from the northeast line of the C. Blanco survey.

Tom Wren has spudded in on Survey 254 in Zapata County, about a mile east of the discovery Mirando well and about the same distance west of the Jim Hogg County Pool.

Zavala County

D. H. Byrd-Oil Dominion's No. 1 Pryor in Zavala County is drilling at 1,470 feet. Continental Oil Co.'s No. 1 Pryor in Zavala County is drilling at 2,250 feet and having trouble with a crooked hole.

Three Rivers Territory

W. J. Walton's No. 1 Odem, 1 mile west of Three Rivers, in Live Oak County, is drilling at 1,259 feet. George B. Pickett's No. 1 fee, out of the George West ranch, 1 mile south of Walton's test, is drilling at 1,400 feet. Chandler, a little north of Walton, is standing at 650 feet and endeavoring to make a gas well on the Tips land. These tests are all in a district where there have been considerable showings of oil and gas, and during the last summer efforts in several wells were made to bring in a field, but with indifferent success thus far. Tests were only to shallow depths. Houston Gulf Gas Co.'s No. 1 Aycock, in McMullen County, 14 miles west of Three Rivers and about 2 miles southwest of the Calliham oil field, has set casing in cement at 1,562 feet, using 6⅝-inch, and is preparing to test a sand at that depth.

The same company has abandoned its No. 1 Fisher, on the north side of the Frio River, at 1,060 feet after several efforts to make a gas well of it. Several efforts have been made at approximately that depth in this field to make either oil or gas wells, there being both oil and gas showings from separate sands at around that depth. The Houston Gulf Gas Co. has spudded in its No. 1 Jacobs, located about 5 miles northwest of the Calliham oil field and nearly that far from the nearest gasser in the field. It is the first new location made by the Houston Gulf Gas Co. on its own geology since it acquired the 40,000-acre block of leases from the Grubstake Investment Association.

Medina County

An offer of a pipe line from the Medina County Ina Field to Hondo, on the Southern Pacific, and a price of $1.25 a barrel for the oil is understood to have been made by one concern to the operators in the field provided a sufficient amount of oil is contracted. Witherspoon is getting ready to spud in the first of his tests and Detert & Olmsted are making the location for theirs. The latter is 300 feet north of the Eastham & Tarver well, on the Viola Wilson farm. Witherspoon's is 1 mile to the southwest. The Gibson Oil Corp. is drilling on its No. 2 Viola Wilson, an offset 300 feet south of the Eastham & Tarver No. 1 Viola Wilson, and should be down to the sand in the next few days. Ina Oil Co. has completed its No. 3 Mrs. Regina Schmidt, on Lot 44 of the Regina Schmidt tract, about 2,000 feet east and about 650 feet north of the discovery well of the field. No. 1 Viola Wilson, of Eastham & Tarver, which was the first really important well in the field, is about a quarter of a mile due north from the discovery well. The No. 3 Regina Schmidt, of the Ina company, has pumped out two carloads of sand and is now making as good a well as the Eastham & Tarver well. The No. 1 Nixon, of the Arnett Oil Co., which is imperfectly completed, but which has been pumping considerable oil for several weeks, is about one-half mile to the southwest of the Eastham & Tarver well, thus making the field about 1¼ miles from northeast to southwest.

During the past week derricks have gone up on other tracts. Holden & Henderson, of El Dorado, Kans., have taken over the Snyder test that was announced on Survey 13. The well is on the M.

M. Adams tract, 215 feet south of the north line and 2,200 feet west of the east line of the E. C. Durst Survey No. 13. The derrick is going up. The well is east of the Hondo River and about 1½ miles south of the Ina discovery well. William Metzger has spudded in with standard tools in the northwest corner of Survey 528 on the Nixon farm, 4 miles southwest of the Ina discovery well and 150 feet each way out of the northwest corner of the tract. Other tests are in abeyance.

GULF COAST

(Continued from Page 46)

month ago and flowed at an estimated rate of 12,000 bbls. before it sanded and finally quit. The Gulf Production Co.'s No. 1 Smith on the north side, but south of the big well, is drilling around 1,560 feet. The well on the Hodges confirmed the belief that a deep sand can be developed on that side of the pool. The Sun Oil Co.'s No. 75 Hooks is around 845 feet and the Peer Oil Co.'s No. 1 Christian is drilling at 835 feet. The Vacuum Oil Co. has a location west of the Hodges. On the east side of the old pool, The Texas Co.'s No. 1 La Garza is drilling below 3,500 feet. In the old shallow sand section the Ada Belle Oil Co.'s No. 106 Paraffin is drilling at 235 feet and the Paraffin Oil Co.'s No. 62 Paraffin is at 695 feet.

The Vacuum Oil Co.'s No. 2 Teel on the east side of the Saratoga Pool, is drilling around 3,710 feet. In the pool, the San Bernard Oil Co.'s No. 18 Hooks is below 865 feet and Paggi Brothers Oil Co.'s No. 8 Lewis is around 575 feet.

In Other Pools

In the Sour Lake Pool, the Yount-Lee Oil Co.'s No. 2 Gilbert is drilling at 3,010 feet. The McNamara Oil Co.' No. 14 Bashara is idle. The Lake View Oil Co.'s No. 45 Hardin is drilling below 2,300 feet. The Texas Co. is working over No. 270 fee. The Lake Graham Oil Co. has rebuilt the derrick over No. 18 Bashara and started drilling.

In the Spindletop Pool, the Gulf Production Co.'s No. 218 Gladys is drilling around 780 feet. The Stella Oil Co.'s No. 7 Keith-Ward is at 1,235 feet. The Lillian Oil Co.'s No. 2 Terrell is drilling around 765 feet.

At High Island in Galveston County, the Gulf Production Co.'s No. 3 Smith, on the south side of the dome and near the Gulf of Mexico, is drilling around 3,000 feet. No. 4 Smith is washing at 3,150 feet. The Sun Oil Co.'s No. 1 Smith is around 800 feet. Its No. 6-C Cade is at 1,910 feet and No. 8 Cade is idle at 3,450 feet. The Island Oil Co.'s No. 1 McCarthy is shut down at 2,270 feet and the Transbay Oil Co.'s No. 2 Tiernan is standing idle at 200 feet.

In the South Liberty Pool, the Gulf Production Co.'s No. 5 Antonie is drilling around 2,400 feet. The East Texas Oil Co.'s No. 1 Le Cour is drilling below 1,500 feet.

In the Big Creek Pool, the Gulf Production Co.'s No. 18 Davis is drilling deeper at 3,176 feet and No. 26 Davis is below 3,375 feet. No wells are drilling at Damon Mound. At West Columbia, The Texas Co. is rigging No. 22 Arnold and the Gulf Production Co. is preparing to work over old wells on the Underwood. The Hyde Production Co.'s No. 1 Lee is idle. The Humble Oil & Refining Co.'s No. 1-B Wilson, on the northwest side, is drilling around 3,900 feet and No. 1 M. & W. is at 3,975 feet. The Houston-Gulf Gas Co. has a derrick up for No. 2 Myers in the Markham Pool. The Gulf company is rigging No. 13-C Blakely at Blue Ridge.

Goose Creek, Hull, Orange

In the Goose Creek Pool, the Humble Oil & Refining Co. is working over No. 12 Smith and sidetracking No. 64 at 2,545 feet. A location has been made for No. 66. No. 4 Harrell, on the west side of the creek, is fishing at 4,775 feet. No. 29 on Galliard Peninsula is drilling around 2,435 feet and No. 30 at 2,910 feet. The Gulf Production Co.'s No. 30 Beaumont, in the bay waters, is drilling deeper at 2,680 feet and No. 32 is cleaning out. No. 11 Chapman-Bryan is drilling around 455 feet. No. 19 John Galliard fee is at 3,319 feet. The Powell Oil Co.'s No. 6 Bryan is working over at 4,455 feet. The Southern Exploration Co.'s No. 7 Freeman in the bay is drilling around 2,120 feet.

In the Hull Pool, the Republic Production Co.-Houston Oil Co.'s No. 20 Dolbear is working over. It is on the east side. On the southeast, the Gulf Production Co.'s No. 60 Phoenix is drilling at 1,845 feet. No. 61 at 455 feet and No. 62 at 354 feet. No. 63 is rigging to start drilling. On the south side, the Sun Oil Co.'s No. 8 Carr is working over. The Humble Oil & Refining Co.'s No. 19 Guedry is at 550 feet. The Houston Production Co.'s No. 8 Barngrover is at 2,835 feet. The Empire Gas & Fuel Co.'s No. 17 Barngrover is drilling around 2,910 feet. On the west side, the Houston Production Co.'s No. 6 Abel is drilling at 2,135 feet. On the northwest, the Mecom Oil Co.'s No. 8 Taylor is fishing at 4,275 feet. The Higgins Oil & Fuel Co.'s No. 5 Taylor is drilling at 4,010 feet. On the north side, the Yount-Lee Oil Co.'s No. 12 Merchant is around 500 feet with No. 13 Merchant rigging to work over. To the northeast, the Gulf Production Co.'s No. 21 Morris-Phillips is rigging up.

In the Orange Pool, south of production, the Sinclair Oil & Refining Co.'s No. 1 Turner is drilling around 4,200 feet. In Cow Bayou, on State land, the Rycade Petroleum Co.'s No. 13-B is at 3,615 feet and No. 14 at 3,910 feet with No. 4-E rigging up. The Tillery Oil Co. is rigging to work over No. 2 State land. On the east side of the bayou, the Gulf Production Co.'s No. 18 Hager fee is at 4,615 feet and No. 19 below 4,675 feet. The Kishi Development Co.'s No. 7 McGuire is drilling around 4,600 feet. Around the center of the old pool, the Humble Oil & Refining Co.'s No. 4 Chesson is drilling about 4,400 feet with derricks up for Nos. 25 and 26. The Continental Oil Co.'s No. 1 Chesson is pulling liner to drill deeper. The casing collapsed in No. 7 Chesson at 3,015 feet. The Edgerly Petroleum Co.'s No. 1 Carbello is at 3,365 feet. The Sun Oil Co. is milling No. 3 Bellisle at 4,690 feet to sidetrack.

Humble Pool

In the Humble Pool, F. M. Long is starting No. 1 Bryan on the north side. The Louisiana Oil & Refining Co. is rigging No. 20 Cherry. The Sun Oil Co. is rigging No. 1 Bender. Marsailles Brothers' No. 7 Long is drilling, as is the Roylat Oil Co.'s No. 3 Cherry. Meskell & Meskell's No. 17 Herman is drilling. J. E. Ratcliff has started No. 3 Crowe.

A review of the operations in the defined pools shows the Gulf Production is the most active with 17 wells drilling. The Humble Oil & Refining Co. has 11 wells drilling in defined territory, the Sun Oil Co. 7 and The Texas Co. 6. The Vacuum and Gulf jointly have 7 wells drilling in South Louisiana.

Outside of the pools proper, the Gulf company is drilling 5 tests on and around old and new prospective salt domes. The Texas Co. is drilling the same number. The Rycade has 4 rigs running and the Sun Oil Co., 2. This does not include formation tests drilling with light gasoline rotary rigs in various sections of the Coastal region. These rigs are operated much cheaper than steam driven outfits. They consume about 100 gallons of gasoline per day as compared with 15 bbls. of fuel oil for a boiler and dispense with the services of a fireman.

Coastal Wildcats

Development work around the older saline domes in the Coastal belt is as follows: At Hockley, Harris County, The Texas Co.'s No. 4 Warren is below 4,117 feet and No. 5 Warren Ranch below 3,655 feet. At Big Hill, Jefferson County, the Houston Oil Co.'s Nos. 1 Pipkin-Davis, and 4 Sun-Davis are shut down. At Stratton Ridge, Brazoria County, the Ridge Oil & Gas Co.'s No. 14 Dannebaum is idle.

At Boling Dome, Wharton County, The Texas Co.'s No. 3 Taylor, is around 3,310 feet and its No. 1 Schoemann is drilling around 565 feet.

In Liberty County, the Humble Oil & Refining Co.'s No. 1 Welder, across the Trinity River from the South Liberty Pool, is drilling around 2,520 feet.

The following operations are being conducted on and around newly located saline uplifts: At Fannette, Jefferson County, the Gulf Production Co.'s No. 4 Thomas, is drilling below 4,235 feet; its No. 2 Hawkins Dome, Matagorda County, is washing around 3,945 feet.

Around the Moore, or Orchard Dome, northwest of Rosenburg, Fort Bend County, the Gulf Production Co.'s No. 5 Moore, is at 3,700 feet. On the Lockwood acreage the Marland Oil Co. of Texas' No. 5 is drilling around 4,485 feet.

Around the Ford Bend, Brazoria County line, the Rycade Petroleum Co.'s No. 5 Wisdom, Nash Dome, is drilling below 1,445 feet. No. 4 Wisdom is around 1,095 feet. No. 5 Nash is around 3,835 feet.

Other wildcats in Coastal counties include the following: The Texas Co.'s No. 3 Thompson, east of Green Bayou, Harris County, is rigging. The Rycade Petroleum Co.'s No. 1 Weems, Hunting Bayou, is below 3,800 feet. The Texas Co.'s No. 4 Mack Miller is around 3,400 feet. The Retreive Oil Co.'s No. 1 Westheimer is drilling deeper below 3,415 feet. The Kirby Petrolum Co. has a derrick up for No. 1 Lipper. C. D. Baldwin's No. 1 Haney, 3 miles east of Elena, is idle at 3,015 feet.

In Chambers County, C. T. Rucker's No. 1 Fisher, 8 miles east of the Goose Creek Pool, is drilling around 2,725 feet.

In Wharton County, James W. Rich and Humphreys Corp.'s No. 1 Dennis, 12 miles west of the Boling Dome, is below 500 feet.

In Liberty County, Leland and Wilcox's No. 1 Groggan Lumber Co. lands, is shut down, as is the Liberty Production Co.'s No. 1 Seaburg. The Sun Oil Co. is making formation tests on the Masterson land, northeast of Devers.

In Jefferson County, the Walton Oil Co.'s No. 2 Franids is rigging northwest of Beaumont and the Deutser Oil Co. is shut down near the city limits. The Sun Oil Co. is making formation test near Winnie at the junction of Chambers and Jefferson Counties.

Geophysical tests are being made in the Bramhill section of Harris County, 16 miles north of Houston.

The Texas Co. is starting No. 1 Driscoll in Neuces County and the Humble Oil & Refining Co.'s No. 2 Hargist in Duval County. H. A. Cutler is rigging No. 1 Drumgoole, Colorado County. The Humble Oil & Refining Co. has leased 250 acres in the vicinity of Alta Lome, Galveston County, at from $10 to $20 per acre bonus. The Roxana Petroleum Corp. recent took up 2,500 acres from J. O. Ross in that part of the same county.

Bartlett & Brooks are rigging No. 1 C. Heard in Refugio County.

The Neilan Co., Inc.'s No. 1 Fredericks in Fort Bend County is showing gas in a sandy shale at 2,350 feet.

South Louisiana

Very little change is noted in the status of wildcats drilling in the south Louisiana Parishes. In Calcasieu Parish, the most active, the Standard Oil Co. of Louisiana's No. 1 Industrial Lumber Co. and the Gulf Refining Co.'s No. 1 Lutcher-Moore Lumber Co. lands, are idle, waiting for casing to set. Earle Pool's No. 1 Castle is below 2,250 feet. The Big Woods Oil Co. has started No. 1 Robertson and the Union Sulphur Co.'s Nos. 1 Dorion and 1 Verdine and Crous and Manigan's No. 1 are drilling.

In Cameron Parish, the Yount-Lee Oil Co.'s No. 1 State land, Hackberry Island, is below 3,200 feet.

In St. Mary's Parish, Leland and others' No. 1 Caffery, Cote Blanche Island, is fishing at 1,200 feet.

In Catahoula Parish, Ferguson and Kimbrough's No. 1 Nichols, is drilling around 1,635 feet.

In St. Martin Parish, the Ohio Oil Co.'s No. 1 Hager Dome, is shut down at 845 feet.

In Jeff Davis Parish, Yount-Lee Oil Co.'s No. 8 Ervine is rigging.

In Rapides Parish, Hincy and others'

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No. 1 Barrow, is shut down at 1,035 feet.

In Iberia Parish, the United Oil & Gas Syndicate's No. 1 Salt Mine, Jefferson Island, is drilling with a location for No. 1 State land in a lake.

E. F. Simms, a Houston oil operator, has leased several hundred thousand acres in various parishes and will start formation tests.

Laredo Shipments

A total of 812 tank cars were shipped from the Laredo pools during the month of November, a decrease of 70 cars compared with October. The bulk of the shipments were made by the Texpata Pipe Line Co. and others by the Magnolia Petroleum Co. to Beaumont and the Crown Central Petroleum Co. to its refinery at Pasadena on the Houston ship channel. This crude is used for the manufacture of lubricants and comes into competition with the Coastal crude for the same purpose.

KANSAS

(Continued from Page 50)

16-23-9, had gas 2,331-65 feet and broken sand 2,365-76 feet with 1,000 feet of oil in the hole. Phillips Petroleum Co. is rigging up No. 8, CWL NW SW, Section 19-23-9. White Eagle Oil Co.'s No. 2, SW cor. NW SE, Section 19-23-9, has cleaned up a fishing job in sand 2,569 feet and has 1,000 feet of oil in the hole, and the rig is up for No. 5 Morris, NE cor. NW SE, Section 19-23-9.

Other Greenwood Operations

Roth, Faurot and others have completed No. 3, SE cor. NE NE, Section 27-23-10. Sand was 2,305-45 feet and the well is good for 20 bbls. after a shot of 70 quarts. Selby Oil & Gas Co.'s No. 4, SW cor. NE SE, Section 35-22-9, had sand 2,505-61 feet and is making 12 bbls. after a shot of 100 quarts, and the rig is up for No. 6 Shambaugh, SW cor. NW SE, Section 35-22-9. Dingee, Pryor and others have a rig up for No. 1 Evans, NW cor. NE, Section 1-22-9. Roth & Faurot have completed No. 1, SE cor. SE, Section 9-23-10. Sand was 2,161-82 feet and the well is making 25 bbls. naturally. Empire Gas & Fuel Co. has spudded No. 1, NE cor. NW, Section 6-22-10. Phillips Petroleum Co. has the rig up for No. 5 Warrensburg, NW cor. SW SW, Section 12-22-10. Sinclair Oil & Gas Co.'s No. 29 Browning, CSL SE SW, Section 20-22-10, had sand 2,253-2,341 feet and was shot with 160 quarts. It has 1,200 feet of oil in the hole. Sinclair Oil & Gas Co. is building the rig for No. 33 Browning, SW cor. SE NW, Section 20-22-10, and the rig is up for No. 34 Browning, SE cor. SW, Section 20-22-10. The Texas Co. has a rig on the ground for No. 3, SW cor. NW SW, Section 29-22-10. Titus and others have spudded No. 6, SE cor. SW NW, Section 29-22-10. Phillips Petroleum Co. has the rig up for No. 3 Prather, SE cor. NE SE, Section 30-22-10.

In the Fromm Pool, the Tidal Oil Co.'s No. 6, NW cor. SE NE, Section 11-22-11, had sand 1,747-70 feet with a total depth of 1,810 feet. It was shot with 160 quarts and is good for 150 bbls. Tidal has a rig on the ground for No. 7 Kipfer, SW cor. NE NE, Section 11-22-11. Empire Gas & Fuel Co.'s No. 5, SE cor. NE NE, Section 15-22-11 had sand 1,885-1,904 feet with a total depth of 1,909 feet. It was shot with 80 quarts and is making 95 bbls. Mid-Continent Petroleum Co.'s No. 5 Clopton, NW cor. SE SW, Section 18-22-11, is rigging up. Phillips Petroleum Co. has a rig on the ground for No. 5 Coffman, NW cor. SE NE, Section 30-22-11. Pryor & Lockhart are drilling at 840 feet in No. 2, NW cor. NE NW, Section 30-22-11. Phillips Petroleum Co.'s No. 6, NE cor. NW SW, Section 33-22-11, had sand 1,910-44 feet and is making 50 bbls. after a shot of 100 quarts. J. H. Tatlock has abandoned the location for No. 1, SE cor. SE, Section 4-22-12. Lewis Oil Co. has a rig up for No. 1 Waymire, SW cor. NW NW, Section 6-22-12. In the Virgil Pool, the Mid-Continent Petroleum Corp. has the rig up for No. 7 Shadel, CSW Section 15-23-13.

Along the Beaumont anticline, Tom Miller and others are drilling at 375 feet in No. 1, NE cor. SE, Section 23-26-9. Flint Ridge has the timbers on the ground for No. 2 Miles, SE cor. NE, Section 23-26-9. Southeast of Eureka, Moore and others have a failure in No. 1, SE cor. SE, Section 9-26-11. Top of the lime was 1,892 feet, a show of oil at 1,900 feet and the well is dry and abandoned at 1,977 feet. W. O. Laure has a machine drilling at 500 feet in No. 1 Scholenback, NW cor. SW, Section 3-26-12.

The Greenland Oil Co. has the rig on the ground for No. 3 Croft, SW cor. NW SW, Section 25-23-8. Tom Conway has a rig up for No. 1 Noller, SW cor. NE SW, Section 10-23-9.

Butler County

The Skelly Oil Co. is drilling at 400 feet in No. 1, NE cor. NE, Section 14-25-3. Sinclair Oil & Gas Co. and Empire Gas & Fuel Co. have a rig up for No. 13, NE cor. NW NE, Section 35-27-4. Mason & Ralston have a rig up for No. 2, NE cor. SE SW, Section 32-26-6. White Eagle Oil Co. has spudded No. 1, SW cor. NE SW, Section 27-26-7. Brennon & Wixon are shut down at 300 feet in No. 1 Hurtley, NE cor. SE SE, Section 28-26-7. Phillips Petroleum Co.'s No. 1, NE cor. NW, Section 16-27-6, is running the 5-inch casing at 3,120 feet with 500 feet of oil in the hole. It is shut down and not completed. Phillips Petroleum Co. has the rig up for No. 1 Kruse, NE cor. NW, Section 27-27-7. John Rogers is drilling at 500 feet in No. 1, NE cor. NE, Section 32-27-7. Sheldon and the Greenland Oil Co.'s No. 1, NW cor. NW, Section 34-27-7, had sand 2,738-63 feet and was shot with 100 quarts and is making 125 bbls. oil and 40 bbls. water. It is not completed.

In the Atlantic Pool, the Mid-Kansas Oil Co. has a rig up for No. 1 Nelson, NE cor. NW, Section 22-28-7. Martle Oil Co. has built the rig for No. 1 Brewer, NW cor. SW, Section 23-28-7. Flack & Davidson have abandoned the location for No. 1, SE cor. SE, Section 29-28-7. Tahin and others' No. 1, NE cor. SW, Section 12-29-6, had sand 2,732-42 feet with 1,600 feet of oil and water in the hole. It is not completed. Gardner and the White Eagle Oil Co. have the rig up for No. 1 Steinholt, NW cor. SE, Section 21-29-6. White Eagle Oil Co. is drilling at 890 feet in No. 1, SW cor. SE NW, Section 25-28-6. Atlantic Oil Producing Co. has a rig on the ground for No. 2 Sensebaugh, NE cor. SE SW, Section 15-28-7.

In the Robinson Pool, Joe Nathan and others have a rig on the ground for No. 1 Doornsbon, SW cor. SE SE, Section 28-25-6.

The Skelly Oil Co. has spudded No. 2 Wilson, NW cor. SW NW, Section 13-25-3. Empire Gas & Fuel Co. is drilling at 450 feet in No. 29 Murry, NW cor. NE NE, Section 30-25-5. Near El Dorado, the Lewis Oil Co. has a rig up for No. 1 Palmer, SW cor. NE, Section 32-26-6. Phillips Petroleum Co. is drilling at 340 feet in No. 1, NW cor. SE SW, Section 27-26-7. Sheldon and others are drilling at 625 feet in No. 2, NE cor. SW SW, Section 27-26-7. W. Hoyt has a rig up for No. 1 Huntley, SW cor. NW, Section 32-26-7. Richland Drilling Co. put up the rig for No. 1 Brissey, SW cor. SE, Section 8-27-6. Phillips Petroleum Co. has completed a small well in the Leon Pool in No. 1, NE cor. NW, Section 16-27-6. Sand was 3,131-36 feet and the well is making 30 bbls. oil and 15 bbls. water.

Sinclair Oil & Gas Co. has spudded No. 1, NW cor. SE SE, Section 22-27-7. Empire Gas & Fuel Co. has a rig on the ground for No. 1 Tobler, NW cor. NE, Section 27-27-7. Phillips Petroleum Co. has spudded No. 1, NE cor. NW, Section 27-27-7. The Greenland Oil Co. and Sheldon's No. 1, NW cor. NW, Section 34-27-7, had sand 2,738-63 feet and the well made 134 bbls. of oil and 13 bbls. of water the first 24 hours. Federal Oil Co.'s No. 5, CSL NW NW SW, Section 29-26-8, had the sand 2,679-2,759 feet and was shot with 160 quarts. It is making 40 bbls. of oil and 40 bbls. of water. Cowpunchers Oil Co. has

completed a well on the east edge of the county in No. 1, NE cor. SE, Section 30-26-8. The sand ran 2,677-2,715 feet, and after a shot of 300 quarts the well is making 60 bbls. of oil and 300 bbls. of water. Tom Miller has a dry hole in No. 1, NW cor. NE, Section 31-26-8, which is abandoned at a total depth of 2,799 feet.

Sheldon and others have a failure in No. 1, NW cor. SW, Section 6-28-7, which is being plugged from a total depth of 2,800 feet. John Howard is rigging up No. 1, SW cor. NW NE, Section 9-28-7. Martle Oil Co. has spudded No. 1 Ramp, NW cor. SW, Section 23-28-7.

Marion County

Troup and others are rigging up No. 1, NE cor. SW, Section 8-19-4. In the Covert-Sellers Pool, Sheedy and the Empire Gas & Fuel Co. are drilling at 500 feet in No. 3 Allison, SW cor. SE NE, Section 24-21-4.

Lyon County

North of the Browning Pool in Lyons County, Ritchie & Moore have a sand 1,980-84 feet with 1,500 feet of fluid in the hole. The 8-inch casing is being underreamed. Swartz and others are drilling at 1,150 feet in No. 1, NW cor. NW, Section 36-21-11. London and others' No. 3 Childers, SE cor. NE, Section 32-21-12, had sand 1,880-1,920 feet with a total depth of 1,924 feet. It was shot with 100 quarts and is good for 90 bbls.

Coffey County

Watchorn Oil Co. has a rig up for No. 1, CNL NW NW NW, Section 29-19-16.

Elk County

The Elk Petroleum Co.'s No. 1 Taylor, NE cor. NW SW, Section 17-29-10, had sand 1,271-83 feet with 4,000,000 feet of gas. It has a rock pressure of 250 pounds. In the Arbuckle Pool, Anderson Brothers are drilling at 1,125 feet in No. 1, CNE SE, Section 16-31-9. R. G. Gillespie's No. 4, SE cor. NE SE, Section 22-31-10, had sand 1,351-56 feet and was shot with 40 quarts. It is making 15 bbls. of oil and a large quantity of water, and is completed. Empire Gas & Fuel Co. has completed No. 1, SW cor. NW SW, Section 23-31-10. Sand was 1,324-59 feet and the well was plugged back to 1,357 feet. It was shot with 5 quarts and is making 30 bbls. Frazier and others' No. 1, CSL SW NW, Section 25-31-10, had sand 1,985-95 feet, dry, and 300,000 feet of gas in sand 2,010-35 feet and is completed. Neeley Oil & Gas Co.'s No. 1, NE cor. NE, Section 29-31-10, had a show of oil 1,402-50 feet, and pay sand 1,549-55 feet. It is making 40 bbls.

Chautauqua County

Watchorn Oil & Gas Co. has spudded No. 1 Gibson, SE cor. NE, Section 20-32-10. Manning, Street and others are drilling at 200 feet in No. 1 Hazleton, NE cor. SE NE, Section 15-32-10. Blackwell Oil & Gas Co. had a showing of oil in sand found 1,948-57 feet.

In the Peru district, Ludowic and others' No. 6, CSL NE SE NE, Section 34-34-12, had gas 1,260-69 feet, and the top of the lime 1,998-2,047 feet and was plugged back to the gas in the upper sand and completed for 500,000 feet of gas.

Cowley County

The Marland Oil Co. has spudded No. 1 Curry, SW cor. SE NW, Section 1-31-3. This is north of the Trees Pool. Palter & Banks have a rig up for No. 1, NE cor. NW, Section 32-30-5. The Trees Oil Co. has a dry hole in No. 2, SW cor. NW NE, Section 28-31-4, which is abandoned at a total depth of 3,025 feet. In the Eastman Pool, Foster & Deal are drilling at 1,475 feet in No. 3, SW cor. NW, Section 8-31-6. On the east edge of the county, D. B. Golden is building the rig for No. 1 Ferguson, NE cor. NW, Section 28-30-8. Trees Oil Co. has built the rig for No. 3 Mahanna in the SE cor. of Lot 19, Section 6-30-8.

In the Carson Pool, the Carter Oil Co. has built the rig for a twin well in No. 9 Waite, NW cor. NE SE, Section 19-32-3. The Derby Oil Co. has completed a well in No. 1, CNL NW NW NE, Section 21-33-3. Sand was 3,217-38 feet with a total depth of 3,240 feet in chat. The well is good for 30 bbls. naturally.

In the Rainbow Bend district, the owners, Waite Phillips Co., Independent Oil & Gas Co. and Marland Oil Co., have completed No. 1, SW cor. SE, Section 21-33-3. Sand was 3,247-82 feet and the well had an initial production of 78 bbls.; No. 11, SW cor. NW NW, Section 21-33-3, had the sand 3,203-24 feet with a hole full of oil, and a fishing job; No. 16, SE cor. NW NW, Section 21-33-3, had sand 3,202-33 feet and made 50 bbls. naturally; No. 3, NE cor. SE NW, Section 21-33-3, had sand 3,216-42 feet and made 365 bbls.; No. 5 Nelson, NE cor. SW, Section 21-33-3, is rigging up, and the rig is being built for No. 4 Nelson, SE cor. SE NW, Section 21-33-3.

East of Winfield, Lewis and others are spudding No. 1, NW cor. NE NW, Section 30-32-5. In the Padgett area, the Prairie Oil & Gas Co. is drilling at 3,550 feet in No. 1 McEwan, CNL SW, Section 34-34-2. This is an old well drilled deeper. West of Arkansas City, the Roxana Petroleum Corp. has spudded No. 1, SE cor. SW SE, Section 16-34-3; and near the Oklahoma line Roxana Petroleum Corp. is building a rig for No. 1, Gallery, NE cor. NW SW, Section 18-35-3. East of Arkansas City, Phillips Petroleum Co. is rigged up in No. 1 Hunt, NE cor. NE, Section 16-34-5.

MEXICO PLANS COMPETITION

"Governed by the theory that Mexico possesses the largest amount of oil and will figure among the world's most powerful nations, Mexico intends to put into effect extensive plans toward establishing giant oil storage reserves which will be kept in storage tanks to be built at strategic points throughout the Republic during the coming year," says an article in "Excelsior." The capacity of the smallest of these tanks will be 400,000 bbls., it is reported. Making use of the concession held by the National Railways of Mexico, which allows the railways to drill for oil along the right of way, Mexico intends to go into the oil business in competition with American and other foreign oil companies now operating in this country, with the object of carrying out the Government's general nationalist program, it is understood.

PAN AMERICAN'S BIG MEXICAN PRODUCTION

Pan American Petroleum & Transport Co. has more potential production developed in Mexico than in several years, according to Colonel William Green, vice president. In the northern fields its Ebano wells are producing 42,000 bbls. a day, with noncompetitive wells shut in. The shut-in wells are believed capable of producing between 40,000 and 50,000 bbls. a day, making a potential production of 80,000 to 90,000 bbls. a day in the northern fields.

In the southern light oil fields the company is producing 50,000 bbls. a day and has an additional 70,000 bbls. of production shut in, or a total of 120,000 bbls. a day safely available in that field.

In addition, the company is handling about 30,000 bbls. daily of Smackover crude at its refinery at Destrehan, La., near New Orleans, and has recently acquired control of Lago Petroleum Corp., which has a production of more than 30,000 bbls. a day in Venezuela.

WINKLER COUNTY TEST

FORT WORTH, Texas, Dec. 5.—McCamey & Johnston of this city have taken the contract for the drilling of what is known as the Westbrook well in Winkler County, western Texas. The derrick is up and drilling is to start shortly after January 1. The well is to be drilled to a depth of 3,000 feet. The location is on the Kendrick ranch in the southeast corner of Section 42, Block B-5 of Public School Lands of Winkler County.

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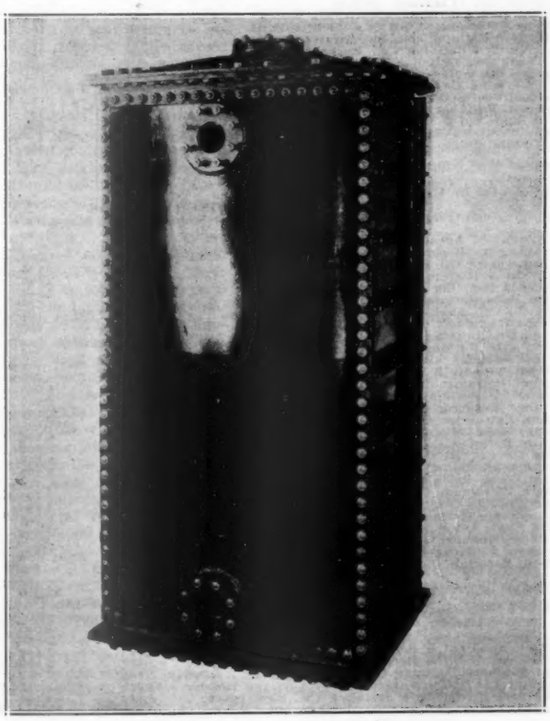

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REFINERY RUNS NEAR LOW POINT OF YEAR

(Continued from Page 30)

Illinois Oil Co., Cushing	3,000	1,600	1,600
Imperial Refining Co., Ardmore	6,000	3,350	3,600
Independent Oil & Gas Co. (Allied), Okmulgee	1,800	1,200	1,000
Interocean Refining Co (Lorraine), Bristow	4,000	1,200	1,500
Johnson Oil Refining Co., Cleveland	4,000	3,500	3,500
Lawton Refining Co., Lawton	1,000	3,500	3,500
Marland Refining Co., Ponca City	30,000	12,000	12,000
Mid-Continent Petroleum Co. (Cosden), West Tulsa	35,000	26,500	26,500
Newkirk Oil & Refining Co., Newkirk	2,000	Shut down	Shut down
Nyanza Refining Co., Wilson	3,500	Shut down	Shut down
Oil State Refining Co., Enid	2,000	1,000	1,000
Okla-Tex. Refining Co. (Sagamore), Grandfield	2,000	Shut down	Shut down
Phillips Co. (Waite), Okmulgee	6,000	5,000	5,000
Peppers Gasoline Co., Covington	1,000	750	800
Pierce Oil Corp., Sand Springs	10,000	6,000	7,000
Producers & Refiners Corp., West Tulsa	7,000	4,000	4,500
Producers & Refiners Corp., Blackwell	4,000	Shut down	Shut down
Pure Oil Co., Ardmore	6,500	2,000	2,000
Pure Oil Co., Cushing	5,000	Shut down	3,000
Pure Oil Co., Muskogee, (O. P. & R. Co.)	2,500	2,000	2,000
Red Seal Refining Co., Oklahoma City	2,500	Shut down	Shut down
Riley Petroleum Co., Bristow	800	500	400
Rock Island Refining & Pipe Line Co., Duncan	2,500	1,850	2,000
Roland Oil Co., Bristow	1,500	600	600
Sayre Oil & Refining Co., Sayre	500	100	100
Shaffer Oil & Refining Co., Cushing	10,000	10,000	10,000
Sun Oil Co., Yale	3,000	2,500	2,500
Sinclair Refining Co., Cushing	6,000	Shut down	Rerun
Sinclair Refining Co., Muskogee	1,000	1,000	1,000
The Texas Co., West Tulsa	10,000	10,000	10,000
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,390	1,500
Tidal Refining Co., Drumright	6,500	6,000	5,500
Transcontinental Oil Co., Boynton	2,500	2,500	2,500
Transcontinental Oil Co., Bristow	6,000	5,000	5,000
Tonkawa Petroleum Co., Tonkawa	2,500	900	900
Whaleback Production Co., Oklahoma City	1,500	Shut down	Shut down
Western Oil Corp., Beckett	1,500	1,500	1,200
Yale Oil Corp., Yale	1,500	500	600
Total	268,000	163,880	170,550

REFINING OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Dec. 1	Runs Nov. 1
Amarillo Refining Co., Amarillo	5,000	3,000	4,500
American Refining Co., Wichita Falls	7,000	4,800	5,000
Big Four Refining Co., Panhandle	1,500	1,000	1,000
Bridgeport Refining Co., Bridgeport	1,000	Shut down	Shut down
Buffalo Refining Co., Sherman	500	200	200
California-Texas Refining Co., Colorado	5,000	2,300	2,200
Crystal Petroleum Co., Burkburnett	1,000	250	250
Dale Oil & Refining Co. (Griswold), Electra	3,000	1,200	1,000
De Leon Refining & Pipe Line Co., De Leon	1,500	Shut down	Shut down
Falls Refining Co., Wichita Falls	1,500	500	500
Four States Refining Co., Texarkana	750	Shut down	Shut down
Gulf Refining Co., Fort Worth	15,000	6,400	6,400
Hagaman Refining Co., Tiffin	2,000	275	275
Humble Oil & Refining Co., Burkburnett	4,000	2,200	2,200
Humble Oil & Refining Co., Hearne	10,000	Shut down	Shut down
Iowa Park Producing & Refining Co., Iowa Park	2,500	1,200	1,400
Kent-Middleton Refining Co., Corsicana	2,500	800	800
Miller Petroleum Co., Wichita Falls	3,000	1,800	1,800
Magnolia Petroleum Co., Fort Worth	12,000	6,800	6,800
Magnolia Petroleum Co., Corsicana	10,000	2,800	2,800
Megargel Refining Co., Megargel	2,000	600	600
Mexia Oil & Refining Co., Mexia	600	Shut down	Shut down
National Refining Co., Texas, Greenville	2,000	Shut down	Shut down
Noble Oil & Gas Co., Burkburnett	5,000	2,700	3,200
Olney Oil & Refining Co., Olney	1,200	1,200	1,100
Oriental Refining Co., Dallas	6,000	200	200
*Oriental Refining Co. (Trinity), Dallas	5,000	3,000	3,000
Orient Petroleum Co., Wichita Falls	2,000	1,650	950
Paris Refining Co., Paris	250	250	250
Panhandle Refining Co., Wichita Falls	4,000	3,100	3,000
Peerless Refining Co., Wortham	400	350	350
The Petroleum Corp., Electra	2,000	200	600
Primrose Refining Co., Wichita Falls	1,500	Shut down	800
Producers Refining Co., Gainesville	5,000	4,000	4,000
Simms Oil Co. (Clayton), Dallas	4,500	3,400	3,750
Star Refining & Producing Co., Fort Worth	1,500	Shut down	Shut down
Sunshine Consolidated Oil Co., Wichita Falls	2,500	1,400	1,600
Sweetwater Refining Co., Sweetwater	500	100	100
Tidal Western Refining Co., Burkburnett	3,000	1,750	2,000
The Texas Co., Dallas	15,000	9,700	9,700
Texhoma Oil & Refining Co., Wichita Falls	7,000	4,500	4,200
Tiger Refining Co., Breckenridge	1,500	Shut down	Shut down
Transcontinental Oil Co., Fort Worth	5,000	2,750	2,600
Waggoner Refining Co., Electra	3,400	2,500	2,700
White Eagle Oil & Refining Co., Fort Worth	5,000	2,500	2,600
Wilson Brothers Refining Co. (Wichita Refinery) Wichita Falls	2,500	1,000	1,200
Total	177,100	82,375	85,625

*Operated by Magnolia Petroleum Co.

REFINING OPERATIONS IN KANSAS
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Dec. 1	Runs Nov. 1
Arkansas City Refining Co., Arkansas City	5,000	1,000	1,200
Commonwealth Oil & Refining Co., Moran	1,800	100	100
Derby Oil & Refining Co., Wichita	5,000	2,650	3,500
El Dorado Refining Co., El Dorado	3,500	2,500	2,500
Golden Rule Refining Co., Wichita	1,000	500	500
Grant Oil Co., Augusta	1,500	Shut down	Shut down
Kanotex Refining Co., Arkansas City	9,000	4,800	4,800
Kansas Oil Refining Co., Coffeyville	2,000	Shut down	Shut down
Kansas City Refining Co., Kansas City	5,000	4,000	4,500
Miller Petroleum Co., Humboldt	2,000	Shut down	Shut down
National Asphalt & Road Oil Co., Kansas City	400	Shut down	Shut down
National Refining Co., Coffeyville	6,000	6,000	6,000
Peerless Oil Refining Co., Chanute	3,000	2,000	2,200
Red Bird Refining Co., Fredonia	200	Shut down	Shut down
Roxana Petroleum Corp., Arkansas City	18,000	17,000	17,000
Sinclair Refining Co., Coffeyville	6,500	6,500	6,500
Sinclair Refining Co., Argentine	8,000	4,000	4,000
Skelly Oil Co., El Dorado	14,000	9,750	10,000
Standard Oil Co. of Kansas, Neodesha	12,000	8,000	6,700
United Oil & Refining Co., Hutchinson	2,500	Shut down	Shut down
Vickers Petroleum Co., Potwin	3,500	2,800	2,800
Waite Phillips Co., Wichita	5,000	3,350	3,000
West Kansas Refining Co., Russell	2,500	1,500	1,500
White Eagle Oil & Refining Co., Augusta	6,500	5,000	4,500
West Missouri Group—			
Interstate Refining Co., Centropolis	1,500	Shut down	Shut down
Wilhoit Refining Co., Joplin	1,600	800	1,000
Total	129,900	82,250	80,800

REFINING OPERATIONS IN NORTH LOUISIANA
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Dec. 1	Runs Nov. 1
Caddo Central Oil & Refining Co., Shreveport	3,500	2,500	2,500
Caddo Central Oil & Refining Co., Shreveport	5,000	5,000	5,000
Great Southern Refining Co., Ardis	2,000	500	500
Louisiana Oil Refining Corp., Shreveport and Bossier	15,000	12,000	12,000
Shreveport Producing & Refining Co., Shreveport	5,500	4,000	4,300
*The Texas Co., Ardis	7,000	6,000	6,000
Total	37,500	30,000	30,300

*Topping.

REFINING OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year.)

Name and Location—	Daily Capacity	Runs Dec. 1	Runs Nov. 1
Cross Refining Co., Smackover	2,500	2,300	2,000
Home Refining Co., Camden	500	100	100
Home Oil & Refining Co., Hot Springs	500	100	100
Houston Oil Co., Camden	5,000	1,750	1,750

Kettle Creek Refining Co., Pearson	4,000	2,500	2,500
Lion Oil & Refining Co., El Dorado	10,000	7,500	6,500
McMillan, Fehlman & Oliver, El Dorado	1,600	800	300
Ouachita Valley Refining Co., El Dorado	1,500	750	850
Pine Bluff Refining Co., Pine Bluff	2,000	Shut down	Shut down
Rex Refining, El Dorado	2,500	1,670	1,850
*Union Pipe Line & Refining Co., El Dorado	4,000	Rerun	Rerun
Total	34,000	17,470	15,950

*Cracking stills operated by Ouachita Valley Refining Co.

CALIFORNIA'S POSITION IN PETROLEUM INDUSTRY

(Continued from Page 78)

Beach and Long Beach crude to fulfill eastern contracts. From this time on the gravity has dropped, except in a few cases where the crude has been enriched by adding tops or casinghead gasoline. This blending policy has not been universal, however, because of the volatile nature of the blend.

The crude going East today, about 15,000 bbls. daily, is averaging around 25.0 degrees. The price of this oil at the well is $1.26 per bbl., to which should be added about 5 cents to cover pipe line and loading charges. The average crude can thus be estimated at $1.31 f.o.b. Los Angeles Harbor. The plan of quoting prices f.o.b. here, as has been done in several cases, is particularly advantageous to California operators when dealing with eastern refiners who have their own bottoms, as only one billing is necessary.

The costs involved, while varying somewhat, are all practically the same as the only factor which might differ to any extent is the tanker rate on chartered ships and the cost per barrel on company-owned tankers. Insurance, canal tolls and evaporation loss in transit are fairly stable and affect each shipment proportionately.

Cost of Crude in East

The average cost of laying down a barrel of crude at eastern refineries varies between 50 and 75 cents, bringing the total cost per barrel to around $1.95.

There has been practically no change in the quality of the gasoline going out at present, when compared with that lifted last year. California refiners are rather reticent when it comes to refinery operations and sales and the only comparison available is from a gravity standpoint. The gravity of gasoline to the Atlantic Seaboard at present averages between 53 and 58 degrees, while export cargoes frequently run as high as 63 degrees. While on this subject, it is interesting to note that the Shell is retailing gasoline in Los Angeles territory guaranteed to test 61 degrees. This is probably the highest gravity motor fuel ever put on the market here, as the present winter average runs around 55 degrees.

Gasoline shipments to the Atlantic Seaboard have shown quite a variation during the past few years. The total movement East of refined oil was 2,550,000 bbls. in 1923 and 2,565,000 bbls. in 1924. Indications point to a total of 7,000,000 bbls. during 1925, the highest monthly delivery of 1,150,000 bbls. being made during July. Export shipments of refined oils, principally gasoline, showed a corresponding gain. The total for 1923 was 1,730,000 bbls. This increased to 6,450,000 bbls. during 1924 and the export movement during 1925 will be somewhat in excess of this amount.

As would naturally be expected, crude shipments to the east coast were low when gasoline movements were high and vice versa. The total crude movement during 1923 of 60,950,000 bbls. declined in 1924 to 41,000,000 bbls. and will probably drop to around 17,000,000 bbls. in 1925. Export shipments of crude and fuel oil from California totaled 8,950,000 bbls. in 1923 and 13,700,000 bbls. in 1924. Although the current year has not yet drawn to a close, preliminary figures indicate that this figure will be around 16,500,000 bbls. for 1925.

No Prices Quoted

None of the California refiners, except the major companies, are in a position to quote prices on bulk gasoline at Los Angeles Harbor and for this reason all of the movements made to date have been by the larger companies. No actual figures are available on the price received per gallon of gasoline but it is generally understood to be from 8½ to 10 cents, varying, of course, with prevailing conditions and quantity involved. Transportation costs which include evaporation loss, insurance and other fixed charges on this commodity are also subject to fluctuation but should not exceed 2 cents per gallon. Gasoline in quantity can therefore be laid down on the Atlantic Seaboard at prices varying from 10 to 12 cents per gallon, depending upon the facilities available.

It is practically impossible to venture an opinion on the amount of gasoline which should go East during 1926 as much depends on developments between now and May 1. Disposition of Elk Hills crude after December 31, for instance, may have more effect on future conditions than one might suspect on the surface. Pan American has this oil tied up through this year but is not assured of it thereafter as it is sold by the receivers to the highest bidder. It can be seen how easily this oil, running around 500,000 bbls. a month, might affect the policy of several companies. While speaking of possible developments during the next six months, it is interesting to note that only 914,284 bbls. of light crude was put into storage during October.

In the month of September the accumulation of refining oil was 1,271,557 bbls. Heavy crude also showed a similar action, the surplus during September of 3,407,824 bbls. being over twice the accumulation in October. During the latter month 1,525,410 bbls. of heavy crude and fuel were added to storage. Naphtha distillates, tops, have been on the decline practically all year, the total draft during the first 10 months aggregating 2,917,979 bbls.

Unfilled Storage

No figures are available showing the actual amount of unfilled storage but a careful estimate indicates that there is in excess of 9,000,000 bbls. of room available for the storage of crude and fuel oil. This is not any too much in view of the fact that more than 2,000,000 bbls. a month are being accumulated. Additional steel tanks and concrete reservoirs which are now under construction, however, are expected to prove ample enough to carry refiners over until well into next year. It is needless to say that California operators will continue to store oil in some form for the next three or four months, unless production drops very substantially during this period, which hardly seems possible. I am rather inclined to believe that there will be a marked increase during the next three or four months in the amount of fuel oil leaving here, but that crude oil shipments will decline very appreciably. This will improve conditions somewhat as far as crude and fuel oil storage is concerned but does not help out the gasoline situation.

Although it looks at present as though fuel oil shipments to the east coast will increase, it must not be thought that this will result in a draft on this storage, because it seems as if the production of light oil is getting down fairly close to requirements. If it should become necessary to run any considerable amount of heavy oil to stills to replace the decline in light oil production there will naturally be a larger amount of residuum and fuel oil to dispose of. In checking over the storage facilities it is also interesting to note that there was at one time over 14,000,000 bbls. of tops in storage as compared with only 6,478,634 bbls. at present. It is generally thought that the tankage represented by the difference between these two figures is still available for use. This is somewhat in error as some of these steel tanks have been utilized for the storage of light crude while another considerable part has been used for the storage of other refined and unfinished oils.

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Fig. 21 Fig. 22

Fig. 22 8-cup

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DRESSING NEGRO BABY HELPED CLOSE DEAL FOR HALF ROYALTY

By J. L. Dwyer

There is no more interesting or absorbing study in oil, than a cross-section of the life of the lease broker, or "lease grafter" as he is commonly called. He must be steeled in alertness, tempered with mental agility, and clad in the armor of versatility.

His is a varied activity, taking him one day into the wildest of the wild woods, and the next day into an office where his feet are lost in the thicknesses of Turkish rugs. One day he dines in the regal splendor of Tulsa's best hotel, and the next day he subsists on crackers and cheese in the cross roads store.

One day he is discussing the merits of the Locarno treaty with an executive of some oil company, and the next day finds him at Cranberry Corners plunged into the all-absorbing topic of whether or not Amos committed commercial harikari when he purchased a Goodcord tire for the left hind wheel of his flivver.

In quickly alternating moods he must be as agreeable as a designing relative is to a wealthy old bachelor with one foot in the grave, and as sullen as a Republican watching a Jimmy Walker victory celebration; as gentle as a summer breeze and tougher than the heart of a Follies chorus girl; as easy as last summer's shoes and harder than the overcoat which has been draped about the shoulders of Gibralter for several centuries; as—but—the reader tires of comparisons—and so for the story. As Delilah said to Samson, "it won't be long," and should this simple narrative pall upon the optics all that is necessary is to turn the page.

Money O. K., But—

"Man and boy I've been in the Oklahoma oil fields taking leases and royalties for many years, but last week I had a new experience pulled on me," said a veteran who has been responsible for many a farmer putting the ink on the dotted line, as we inhaled our coffee and drew on the cigars in the comfort of the dining room; but that's getting ahead of the story.

"I'll give you $4,000 cash money for a one-half interest in the royalty under this land. That's the best offer I can make you." It was the veteran speaking to a farmer of the deepest ebony hue. At the mention of this sum of money, the darky quivered like a dish of nervous Jello which has been placed directly in front of an electric fan. Four thousand dollars was a lot of money. True enough he didn't know just how much that was, but it was something less than a million, and the mention of that vast sum conjured up thoughts of voluptuous living; at least he could buy a white shirt. He turned and scanned the land where he had been waging a losing battle against starvation. A scrawny cotton patch, a vest pocket edition of a corn field, and a shack. To say that the agricultural possibilities of the land were limited is putting it mildly. Given a barrel of moonshine and 50 bellicose Irishmen, it would have been extremely difficult to raise even a disturbance on that land. The only thing that could be easily raised there were umbrellas; yet the darky hesitated.

The keen eyes of the broker were upon him, and detected the hesitancy. The alertness sharpened by experience radioed to his mind the fact that the darky had been impressed by the amount of money. Sensing then, that it was not a question of money, but rather some trival matter that caused the darky to put the brakes on, the leaser led trumps. "Well, since you think that's a fair price, let's go to town and sign up the papers and put them into the bank," and then came the source of the trouble.

Now Enter the Baby

Little things innumerable times have led to clashes between nations; a stone wall is observed by the pedestrian, who directs his steps around it, but a tiny pebble, escaping his eye, causes him to fall and break a leg. The cause of all the delay were little things, children, of which the African had more than his share. Chiefly there was the baby, the precious infant who could under no circumstances be left alone in the shack while the trip to town was negotiated. It was like this: The darky's wife was in town visiting relatives, there were children running around the farm who needs must be corraled and taken over to the habitat of his aunt's fifth cousin, 1 mile away. After riding herd on the children, they were trapped and assembled in the leaser's car, and with the father acting as guide extraordinary the trip to the aunt's cousin passed off smoothly.

Then came the matter of the infant. A simple matter it would seem with the rest of the offspring safely parked, but life is ever uncertain. Just at the time when the cottonchopper was ready to start enveloping the baby in its Sunday rigging, the matter of the land's abstract occurred to him, and he started to search for it. High and low the search continued, while Old Sol gradually shifted his position towards the place where Horace Greeley urged the young men to travel. After several apprehensive glances at his watch, a nervousness entered the spot occupied by the leaser, when lo, the precious abstract was found. Upon causally mentioning the hour, and indicating that a faster motion was desirable upon the part of the farmer, without registering the anxiety which surged in his heart, the farmer solved the problem of time. "Are you a married man," he inquired, and the leaser affirmed his state of imprisonment, and added that he had three little leasors of his own. "Well, then, that's easy, you dress the baby while I change clothes," said the farmer, and for the first time in all his experience the grafter did the honors for the struggling infant. It was no simple task, for the infant seems to have ideas of its own, which included a distinct aversion to leaving the place of its birth, but in due time, the garments of Sears Roebuck were placed in approximately the proper location and the trip to town followed.

What the Future Holds

The leaser and his associates now own half of the farmer's royalty. It is in territory which is considered favorable to the production of oil. There are wells drilling on both sides of it, and some day in the dim distant future the leaser who performed the above tasy may enter the ranks of the predatory rich. Think, dear reader, of the situation that will exist. Mayhap the baby then grown to womanhood will be one of the reigning favorites at some dusky social affair, and a rival shall challenge her social supremacy. What a situation. With a slight elevation of her charcoal colored eyebrows, the youngster of this story will announce. "And who are you; do you know that once I was dressed by Mr. Blank," and the challenger will melt like the winter snow before the first rays of the spring sunshine. Or on the other hand, Mr. Blank in his affluence will probably be called upon to speak before the local civic clubs in whatever town his mansion is located, and recalling this experience he will state in a rich, full voice, my friends never allow little things to interfere with the completion of your plans," and the friends will be the richer for the knowledge. Of course, this condition may never come to pass, and is merely mentioned as a possibility, but as the inebriate said when he saw the cerise elephants strolling on the ceiling, "stranger things have happened."

TEXAS PERMIT GRANTED

Permit to do business in Texas has been granted the Pulaski Oil Co., Tulsa, Okla., capital stock $3,000,000; Texas headquarters, Amarillo; I. J. West, State agent.

Production Declined In November in Gulf Coast and Southwest

HOUSTON, Tex., Dec. 7.—The estimated gross production in the Gulf Coast pools during November was 2,872,620 bbls., a decrease of 237,850 bbls. from the gross during October.

The Batson Pool fell off 20,565 bbls. due to a big well there sanding. Damon Mound decreased 1,827 bbls., Goose Creek, 6,724 bbls.; Hull, 35,101 bbls.; High Island, 3,917 bbls.; South Liberty, 95,385 bbls.; Vinton, 8,434 bbls.; West Columbia, 14,486 bbls. The Lockport, La., district increased 13,209 bbls. and the Orange Pool increased 108,780 bbls.

The Orange Pool and the Hull Pool are the only districts at present that can be classed as major fields with 15,000 bbls. or more per day daily average.

The New Lockhart district has the highest daily average per well, or 1,130 bbls. The South Liberty Pool is next with a daily average per well of 166 bbls. The Lockport district was opened in September, 1924, and the South Liberty Pool on January 1, last. The daily average in the West Columbia Pool is 116 bbls. The average per well then drops down to 85½ bbls. for the Orange Pool. Big Creek in Fort Bend County shows a daily average per well of 71¼ bbls. The Hull Pool is next with 68 bbls. and Goose Creek is in line behind with 62 bbls. The average in the Vinton Pool is 52½ bbls. The Batson district is the lowest with a daily average per well of 3⅛ bbls.

The following table gives the number of producing wells in each district, the estimated daily average and the gross for November:

Gross Production Gulf Coast Pools For November, 1925

District—	No. Wells	Daily Average	Gross Prod.
Batson	422	1,345	40,350
Blue Ridge	18	614	18,420
Barber Hill	3	85	2,550
Big Creek	17	1,210	36,300
Dayton	4	51	1,530
Damon Mound	51	1,084	32,520
Edgerly, (La.)	32	510	15,300
Goose Creek	256	10,558	316,740
Humble	296	4,533	135,990
Hull	261	17,716	531,300
High Island	9	841	25,130
Jennings, (La.)	54	1,001	30,010
Lockport, (La.)	4	4,526	135,640
Markham	15	77	2,310
Orange	184	15,788	473,640
Pierce Junction	11	678	20,340
Spindletop	166	1,204	36,030
Saratoga	415	1,601	48,010
Sour Lake	434	4,093	122,560
South Liberty	115	10,910	327,300
Vinton, (La.)	129	6,791	203,730
Welsh-La Bute, La.	4	78	2,340
West Columbia	115	10,362	310,560
Miscellaneous	11	104	3,120
Total November	3,026	95,754	2,872,620
Total October	2,969	100,370	3,110,470
Difference	57	4,616	237,850

Southwest Fields

Gross production in the Southwest fields for November is estimated at 1,264,860 bbls., a decrease of 126,544 bbls. compared with October. The Lockhart Field fell off 63,415 bbls. and Luling, 45,940 bbls. The Laredo districts decreased 7,441 bbls. compared with October.

The following table gives the number of producing wells, estimated, daily average and gross production for each district:

Field—	No. Wells	Daily Average	Gross Prod.
Luling	403	22,225	666,750
*Laredo	398	3,690	110,700
Somerset	231	2,300	69,210
Calliham	28	243	7,290
Rockdale-Minerva	228	1,007	30,210
†Jim Hogg County	69	3,215	96,450
Lockhart	255	9,475	284,250
Total November	1,612	42,162	1,264,860
Total October	1,601	44,884	1,391,404
Difference	11	2,722	126,544

*58 gas wells not included.
†11 gas wells not included.

COMPLETE AGREEMENT

After three months of negotiations a complete agreement has been reached between the Soviet Government and four Japanese mining companies for exploitation of the oil fields on Sakhalin Island, formerly held by the Sinclair interests. The contract will formally be signed December 10. The Japanese expect that the oil thus obtained will eventually make them independent of the United States as regards their fuel supply. Besides the oil wells acquired by Japan under the Peking agreement the Japanese are given the right to exploit an additional area of 10,000 square miles on the eastern coast of Sakhalin for a period of 10 years. They are also given extensive coal fields for development for 50 years. The Japanese will pay the Russians royalties on oil production ranging from 5 to 15 per cent, and on coal from 5 to 8 per cent.

MEXICAN PRODUCTION INCREASED IN OCTOBER

For the first time in many months production of crude oil over a monthly period failed to show a decrease from the previous month. Withdrawals of light and heavy oil for October totaled 8,005,175 bbls., an increase of 471,370 bbls. over September, according to the Chicago Journal of Commerce Mexican correspondent.

All but 9,811 bbls. of the increase was in heavy oil, of which the National Railways accounted for 305,704 bbls. The Transcontinental Petroleum Co. (Standard of New Jersey) showed an increase of 111,921 bbls., virtually all heavy oil, while the Island Oil & Transport Co. entered the heavy crude production list for the first time with 47,320 bbls., in addition to its 38,274 bbls. in the light oil district.

The Pan American Petroleum Co. was the greatest producer with 2,137,220 bbls. Light oil withdrawals were less than in September, but heavy crude showed an increase, due mainly to competitive production of the National Railways along the San Luis Potosi right-of-way. The Pan American reserve has been greatly increased recently in the Ebano and southern districts. About 20,000 bbls. of heavy reserve has been added, with not less than 80,000 bbls. of light reserve.

The Marland Oil Co. is maintaining approximately 100,000 bbls. production in Limon, which is being sold to the Pan American. Drilling has been slow, due to the flooded condition of the country, but with the coming of the dry season it is expected that not less than six strings of tools will be maintained in the hacienda.

Details of production follow:

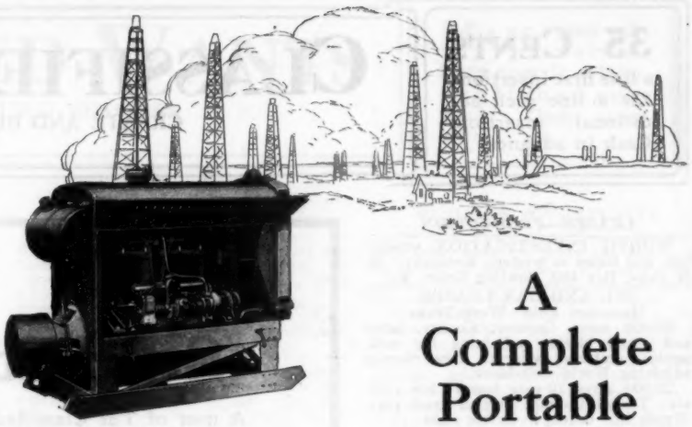
	October Light Crude	October Heavy Crude	Sept. Total
Pan Am. Pet.	1,220,372	916,848	2,113,862
Transcont.	89,475	1,323,972	1,301,526
Mex. Seab.	66,794	822,467	974,269
Dutch-Shell	33,448	461,870	504,421
Mex. Sinc.	11,714	599,914	610,241
Mex. Eagle	498,292	22,292	453,047
Mex. Gulf	225,145	366,379	544,731
Agw.	104,043	.....	104,989
So. Pac.	.....	65,143	72,343
Texas	28,677	38,487	71,351
Penn. Mex.	4,932	.....	6,667
Nat. Rys.	.....	357,655	51,951
Marland	.....	99,862	101,656
Island Oil	38,274	45,320	36,093
Pierce	5,093	8,108	15,508
Miscel.	118,019	432,590	576,830
Totals	2,444,268	5,560,907	7,533,805

MARLAND IN STERLING COUNTY

FORT WORTH, Tex., Dec. 5.—Marland Oil Co. has taken the lease on a large tract of land in Sterling County, southeast of the shallow production recently developed in Howard County by Fred Hyer on the Clay ranch and by the Deep Rock Oil Co. on the Scott ranch. The property consists of about 21,500 acres and is the property of W. F. Davis of Sterling County. It is the intention of the Marland interests to drill a test on the property at an early date.

TO DEVELOP IRAQ

The Anglo-Persian Oil Co., Ltd., has registered a private company known as Khanaquin Oil Co., with nominal capital of £1,000,000 to acquire oil-bearing lands in Kingdom of Iraq. The British treasury has power to appoint two ex-officio directors of the new company. The company intends to develop concessions granted Anglo-Persian Oil Co., Ltd., in 1923 at Naft Khana on the borders of Persia and Iraq where oil areas are already proven.



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Write for Special Bulletin H describing

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"Trustworthy" Power Units

Made in 4 Sizes:

K Series—4-cylinder, 35-48 H. P.
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Also Builders of Climax Refrigerating Units

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California Field Headquarters:
Coast Machinery Corp.,
464-66 E. 3rd St., Los Angeles, Calif.

Chicago Branch.
2007 Harris Trust Bldg., Chicago, Ill.

Sales Offices and Stock of Parts also in the Following Cities:
Birmingham, Ala.—Keiser-Geismer Engr. Co., 1308-9 American Trust Bldg.
Charleston, W. Va.—Beckwith Machinery Co., 311 Moore Bldg.
Chattanooga, Tenn.—Mills & Lupton Supply Co., 1146 Market St.
Dallas, Texas—W. A. Browning Machinery Co., 303-5 Exposition St.
Denver, Colo.—The Hendrie & Bolthoff Mfg. & Supply Co., 1621-39 17th St.
El Paso, Texas—Sheehan & Co., 1615 Bassett Ave.
Houston, Texas—F. W. Gartner Co., 3315 McKinney Ave.
Indianapolis, Ind.—Carl Dunning Supply Co., 828 Lemcke Bldg.
Louisville, Ky.—Brandeis Machinery & Supply Co., 325 W. Main St.
Pittsburgh, Pa.—Beckwith Machinery Co., Corner Front and Brown Sts.
Portland, Ore.—Coast Steel Machinery Co., 1 Porter St.
St. Louis, Mo.—Tulley Equipment Co., 508-9 Title Guaranty Bldg.
San Francisco, Calif.—Coast Machinery Corp., 829 Folsom St.
Seattle, Wash.—Pacific Hoist & Derrick Co., 818 1st Ave. South.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

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MAIL your advertisement now. It will be published next week. Cash with order.

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WORTH INVESTIGATION production and leases in western Kentucky. R. E. Cope, Box 489, Bowling Green, Ky.

OIL AND GAS LEASES
Marathon Fold—West Texas

30,000 acres Crockett County, large and small blocks; adjoining big companies; scattered wildcat. Also close-in adjoining World well block.

20,000 acres 10-year leases; low rentals; Terrell County, getting good play. Watch this county! Prices right.

Upton County. Scattered tracts.

60,000 acres one block, southeast Pecos County, on geological formation. Most attractive as to desirability, price and terms.

5,000 acres Irion County. Ten-year lease; watch the new work here.

7,000 acres Loving County. Ten-year lease; 10-cent rental. Right in line.

Write for prices and maps. Will allow time for geological inspection.

C. W. WEBSTER
W. T. Waggoner Bldg. Ft Worth, Tex.
Reference: Mercantile Agencies.

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For Sale or Sub Lease

Mineral lease on 3,000 acres in Lake Bisteneau, Webster and Bienville Parishes.

Write

MAURICE J. MAYER, Owner
Third St. Baton Rouge, La.

FOR SALE—Oil and gas leases, settled production and leases partly developed. W. P. Harley, Bowling Green, Ky.

SUBSTANTIAL interest for finance to drill 50 acres joining production, Luling Field, two to three hundred bbls. at 2,200 feet; large company owns all adjoining acreage and is actively developing. Need help; let me send more detail. C. C. Bond, San Marcos, Tex.

SOUTHEAST NEW MEXICO
Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves, and Lea Counties. Particulars on request.
H. T. ORCUTT
816 Colcord Bldg., Oklahoma City, Okla.

WEST TEXAS Marathon Fold oil leases. Personal investments since 1919. Write for data and maps. Paul Konz, P. O. Box 291, Fort Worth, Tex.

WILL GIVE deed to 40 acres and lease on balance of 312 acres to any man to drill one well on this land. Mrs. L. M. Roe, Lock box 295, Calico Rock, Ark.

NEW TEN-YEAR lease. 337 acres less than 2 miles from Prairie well showing oil at 2,155. M. F. Beaumont, Hartley, Tex.

1,000 ACRES for an offset well. Free loan of casing. Virgin territory, 3 miles from production. About 1,100-foot drilling costing $2 per foot. Located in Warren County, Kentucky, northwest of Davenport Pool. Full information furnished responsible operators or companies. R. E. Cope, Box 489, Bowling Green, Ky.

FOR SALE—200 acres in fee simple, with an undivided one-fifth interest in 980 acres, located on the Great Brazil Anticline, near deep drilling well, will accept 20 per cent of purchase price cash, balance, without interest, from oil and gas production. Do you know that Oklahoma's new wealth is over a billion per year? For information write E. L. Cooper, 506-7 Commerce Bldg., Kansas City, Mo.

195 ACRES in fee, near Moran, 360-foot sand, produced about 30 bbls. flush production. Price $50; worth that for agricultural purposes. J. S. Darnall, Denton, Tex.

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The Oil and Gas Journal

Tulsa, Okla.

LEASES—PRODUCTION

OIL MEN, LISTEN

We need money for further development, we will sell a part of our East Cross Cut lease holdings at a bargain. Address Douglass Land Co., Cleburne, Tex.

OKLAHOMA

For sale—60 acres prospective oil land, 9 miles Ardmore, near Berwyn, Okla.; all tillable; fine for pecan orchard or dairy farm; $35 an acre. Jess Akers, Breckenridge, Tex.

STEPHENS COUNTY BLOCK

2,000 acres almost solid, titles approved, all new commercial leases. Sections 16, 20, 21, 22 and 28-2s-5w, at $6.50 per acre.

CLYDE MILLER
Duncan, Okla.

FOR SALE—Oil and gas lease, 320 acres, Marion County, Kansas. Southeast quarter of Section 25, Township 20, Range 3 and northeast quarter of Section 36, Township 20, Range 3. Close to producing wells. Other tests going down. How much am I offered? C. E. Storm, 2022 Denver Ave., Kansas City, Mo.

FOR SALE—346 acres oil land at $30 per acre; 186 acres not under lease; will sell at above price and retain one-half royalty. One mile of producing well. Address W. L. Rhoades, Route No. 4, Snyder, Tex.

FOR SALE in fee, 2,204 acres Southeast Archer. Small well on one tract, offset by a 20-bbl. well at 562. Price, $35 per acre in fee, the owner reserving one-fourth mineral.
STEHLIK & BABER
Wichita Falls, Tex.

FOR SALE—All or one-half of 160 acres, Lynn County, Kansas, on shoestring, depth 560 feet, in middle of 3-mile strip. Wells start 8 to 40 bbls. Sure shot. Priced right if sold at once. Do not answer if not interested. Address A. B. S., 246 N. Holyoke, Wichita, Kans.

FOR LEASE—Oil and gas, west half southwest quarter Section 16-15-8, Creek County; also 44 acres, lots 4, 5 and 6, Section 9-6-9, Hughes County, Oklahoma. Wheeler, owner, Box 464, Vincennes, Ind.

NINE surveys, containing 5,120 acres, 10 miles west of Fort Stockton, Pecos County, Texas. Said to be good oil formation. L. S. K., P. O. Box 818, Plainview, Tex.

FOR PANHANDLE oil leases and drilling contracts, write Dr. W. R. German, Canadian, Tex.

LEASES—PRODUCTION

HAVE BUYERS for flush or settled production in Oklahoma and North Texas. Vern R. Hartman, P. O. Box 442, Dallas, Texas.

HAVE SEVERAL pieces of flush and settled production for sale in Oklahoma and Wichita Falls districts. Prices reasonable and terms can be arranged if necessary. P. O. Box 1144, Dallas, Tex.

170,000 ACRES

15-16 mineral fee, blocked solid, U. S. Geological Survey, on formation and structure, reports Permian exposure, dome structure. Shallow to Pennsylvanian. Very favorable to oil and gas production. Artesia, New Mexico, region, across the line in Texas. Price $510,000. P. O. Box 625, Dallas, Tex.

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Standard drilling machine.
1,800 ft. 8¼-in. 28 or 32-lb. casing.
3,600 ft. 6⅝-in. 26-lb. casing.
5,500 ft. 4½-in. 15-lb. casing.

Give full details in first letter. All must be in first-class condition. Lowest cash price, quick action, no delay, will buy anywhere.

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CASING AND OTHER EQUIPMENT FOR SALE

BARGAIN, WANT QUICK SALE

3,000 feet 6⅝" 26-lb.; 2,200 feet 8¼" 32-lb.; 1,200 feet 10" 40-lb.; 500 feet 12½" 50-lb.; 150 feet 15½" 70-lb.; also set 6-inch Oil Well rig irons, 6-horse Fairbanks gasoline pump, tanks and other equipment. Located near Kansas City Southern Railroad, 9 miles west of Hatfield, Arkansas. Communicate with O'Shaughnessy & Haun, Phone 52, Mena, Ark., or Blackwell, Okla.

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AIR COMPRESSORS

12x12 Bury Class L, belt, capacity 314 cu. ft. at 200 R.P.M. 100 lbs.

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14x12x12 Ingersoll Rand Class FR-1, capacity 386 cu. ft. at 250 R.P.M. 125 lbs. air.

12"x8" Union Steam Pump, capacity 315 cu. ft. at 300 R.P.M. 50 lbs. air.

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Two 10'6"x19'6" horizontal, 12,000 gallons each, 1/4", 5/16" flat heads with steam coils.

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77 River St. Hoboken, N. J.

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Two 4-cylinder Bruce MacBeth gas engines, direct connected to Ridgeway dynamoes, 125-250 volts, 60 K. W., speed 300 R.P.M., h.p. 100. Location, Youngstown district. Address reply to C. E. Gallagher, Cor. Boardman and S. Champion Sts., Youngstown, Ohio.

DRILLING OUTFITS

FOR SALE—Two No. 25 Stars, one with 26 engine, and one No. 26 Star, with 27 engine (made ten 1,200-foot wells) all three machines fully equipped with 6¼-inch to 8¼-inch tools, and 25 h.p. mounted boilers. Address H. C. Norris, Portland, Ind.

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6 lines	2.10	3.60	5.10	6.60
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9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

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THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

FOR SALE—One No. 27 Star drilling rig; No. 28 Star drilling rig; one generator; all above in good condition. Also 1,500 feet 4-inch pipe, been run once; 800 feet 6-inch pipe. Address H. B. Campbell Estate, Welch, Okla.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

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FOR SALE—Gasoline tractor cleaning out machine complete, wire line and sand line and string of tools. Price, $900. Box 466, Chanute, Kans.

FOR SALE

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CENTRAL ELECTRIC CO.
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One first class new pumping rig, two 500-bbl. new steel tanks for sale on our property in 10-31-15 Montgomery County, Kansas, south of Neodesha. Want to move this material and will make attractive price to right buyer. Address Singley, P. O. Box 80, Tulsa, Okla. Phone 2-7547.

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OIL WELL MACHINERY
Fort Worth Well Machy. & Supply Co.
"Ft. Worth Spudders," portable drilling rigs, tools, cables and belts.
Engines, Brass Foundry
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CRAGO CUT GEARS
Worthy of your confidence. General machine work. 1416 Walnut. Kansas City, Mo. Phone Harrison 7660.

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ADDRESSES WANTED

ANYONE knowing the whereabouts of Mr. Volney Boshak, age 21, will do a great kindness by notifying his brother, Russel Boshak, at Moravia, Iowa.

HELP WANTED

EXECUTIVE, ENGINEERS, $3,000-$25,000, find our individual, confidential service effective in making new connections. Personally conducted by Mr. Jacob Penn, the eminent employment authority, known to leading business men throughout America. Not employment agency. Jacob Penn, Incorporated, 305 Broadway, New York City, N. Y.

WANTED

WANTED DRILLING PROPOSITIONS
Will drill test well on well located acreage with good geology. Submit with full particulars to Steiner Oil Co., 347 Harvey Snider Bldg., Wichita Falls, Tex.

WANTED RELIABLE CONTRACTOR
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WANTED—Practical man with $25,000 to start $1,000 per day net copper production. A. L. Jones, Brownwood, Tex.

WANTED TO BUY—Small production or old leases ready to be abandoned. Unger Brothers, phone 1894, Muskogee, Okla.

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940 ACRES—Soil 20 feet deep; 700 cultivated; splendid improvements; 14 mules, 70 cattle, tractor, implements; farms 80 acres up, $25 to $50 acre; act quick. Sanderlin & Elliotte, Memphis, Tenn.

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Any size farm or ranch, cheapest good land in Texas. B. W. Floyd, office over First National Bank, Midland, Tex.

WESTERN CATTLE RANCHES at less than liquidated prices. Range conditions better than for years. Industry picking up. Good investment. Paul Jette, Tularosa, New Mexico.

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FLORIDA PROFITS—Fabulous profits are being made in Palm Beach real estate. We have several lots near Singer's Blue Heron Hotel in Palm Beach Ocean development. Small cash payments. Also listings on houses and business property. References furnished. Austin Cunningham, Inc., Office 10 El Verano Hotel, West Palm Beach, Fla.

I OUGHT to be able to sell equipment through this section. It must bring good results, because it is filled with Classified Advertisements every week. Guess I'll try it.

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Arkansas is a piece of gold. Hot Springs National Park is the mine. Better buy a small tract before the boom hits. Write today for information.
THE HAYS-BORDEN CO.
607-8-9 Citizens National Bank Bldg.
Hot Springs National Park, Ark.

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6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

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Sell stock in your company quickly and economically. Worthy enterprises only.
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NOTICE
You know that mineralogy is not new, but was not perfected until now. I can tell you the approximate depth and quantity of your oil or gas or salt water with my new system. Address John Henizman, Box 432, Muskogee, Okla.

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CHOICE Paper Shell Pecans for sale. Buy direct from the grove and save middle man's commission. We have three grades, largest 75 cents; second grade 50 cents, and third grade, 35 cents.

A package of pecans makes a fine Christmas gift. Our prices are f.o.b. Vicksburg, and remittance must accompany order. No order less than five pounds. Address N. Vick Robbins, Vicksburg, Miss. Refer by permission Citizens National Bank, Vicksburg, Miss.

OIL STRUCTURES satisfactory worked out by our methods. If interested in Arkansas write us.
ARKANSAS DRILLING & LEASE CO.
Walnut Ridge, Ark.

MACHINE SHOP — Fully equipped, suitable for all kinds of oil field work and heavy forging. Bargain. Jack Dodson, Mexia, Tex.

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 35 E. Tenth, Oklahoma City, Okla.

FOR SALE—DOGS

BEAUTIFUL registered bull pups $15. Bulldogs, 501 Rockwood, Dallas, Tex.

FOR SALE—Registered German police pups and grown dogs, $25 and up. John Aarestad, McHenry, N. Dak.

COLLIES
Registered collies, female, 4 years old, $25.00 each. Raise your own dogs. R. I. Boiy, Teague, Tex.

PUPPIES — White, pedigreed collie, registered, for sale reasonable. Ray Hicks. Benhams, Va.

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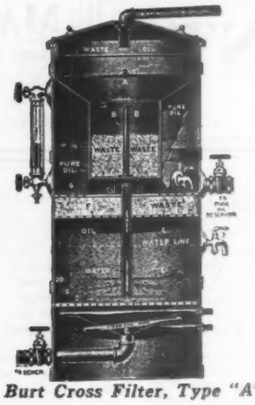

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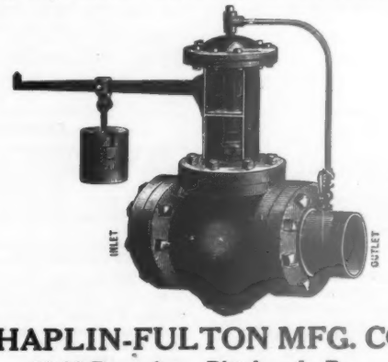

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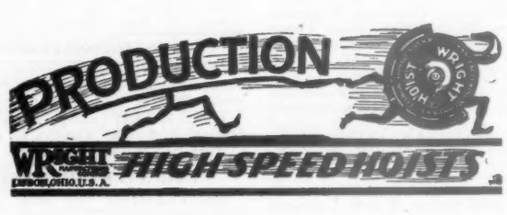


D. M. HAMMETT MADE DIVISION MANAGER

D. M. Hammett, formerly factory representative of the Axelson Machine Co., at Dallas, Texas, has been made manager of the Mid-Continent and Gulf

D. M. Hammett

Coast divisions of the company, with headquarters in Tulsa. He succeeds H. W. Platenberg who was chosen recently to be general sales manager of the company with headquarters in Los Angeles.

Mr. Hammett comes to his new position with extensive experience which will aid him immensely in his work. He not only has had wide experience in the technical and practical phases of the equipment business, but he has been an oil producer and knows the oil business from the producer's angle as well as from the supply store side.

Mr. Hammett represented the Axelson Machine Co. in Houston and Shreveport before going to Dallas, having been with that concern since 1922. Prior to that he was sales manager and vice president of Cupples Lonergan Co., of Shreveport. He was formerly assistant to Mr. Lee, of the Lee Hardware Co., and was connected in an official capacity with the Thomas-Ogilvie Hardware Co., both of Shreveport. Before going with the Axelson Machine Co. he had practical oil experience in fields of Louisiana.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended November 28 totaled 314,000 bbls., a daily average of 44,857 bbls., against 659,000 bbls., a daily average of 94,143 bbls. for the week ended November 21, and a daily average of 52,429 bbls. for the four weeks ended November 28.

At Atlantic Coast Ports—	
Baltimore	75,000
Boston	80,000
New York	.....
Philadelphia	159,000
Others	.....
Total	314,000
Daily average	44,857
At Gulf Coast Ports—None.	
Total Atlantic and Gulf Coast ports	314,000
Daily average	44,857
Daily average 4 weeks ended	52,429

Imports of crude and refined oils at the principal United States ports for the week ended November 28, totaled 1,139,000 bbls., a daily average of 162,714 bbls., compared with 1,005,000 bbls., a daily average of 143,571 bbls. for the week ended November 21, and a daily average of 156,750 bbls., for the four weeks ended November 28.

At Atlantic Coast Ports—	
Baltimore	152,000
Boston	65,000
New York	226,000
Philadelphia	65,000
Others	158,000
Total	666,000
Daily average	95,143
At Gulf Coast Ports—	
Galveston District	126,000
New Orleans and Baton Rouge	113,000
Port Arthur and Sabine District	189,000
Tampa	45,000
Total	473,000
Daily average	67,571
At all United States Ports—	
Total	1,139,000
Daily average	162,714
Daily average 4 weeks ended	156,750

KENTUCKY PRODUCTION DURING OCTOBER, 1925

By T. S. Scott
Secretary Kentucky Oil Men's Association

Production or crude petroleum in Kentucky during October was as follows:

County—	Bbls.
Allen	22,665.05
Barren	26,240.37
Bath	838.06
Boyd	212.00
Clinton	76.21
Cumberland	3,414.63
Daviess	2,298.68
Elliott	417.86
Estill	35,439.37
Floyd	1,126.62
Hancock	2,729.86
Hopkins	1,507.68
Johnson	85,634.70
Knott	450.42
Lawrence	59,102.38
Lee	139,860.03
Logan	49.22
Magoffin	70,502.80
McCreary	300.49
Menifee	121.00
Monroe	788.25
Morgan	639.50
Powell	16,217.06
Ohio	18,743.51
Owsley	1,321.50
Simpson	517.53
Warren	36,915.50
Wayne	11,037.42
Wolfe	4,329.70

ROCKY MOUNTAIN AREA

(Continued from Page 56)

containing oil. The sand was drilled about a foot with a 3-inch bit and the tools pulled out. The hole filled up and made a flow. Then the company decided to try to pump, as there was about 1,000 feet of open hole, a liner was run to shut off the cave and then a string of tubing and rods placed with the result given above. The Argo Oil Co. expects to drill a new hole and probably plug or abandon the present well.

Salt Creek Field

The Midwest Refining Co. and associated firms completed 19 new wells in the Salt Creek Field the past week. The Wyoming Associated Oil Co. completed eight of these as follows: On Section 24-40-79, this company has a first Wall Creek well that will make 25 bbls.; on Section 30-40-78, a second sand well at 2,030 feet that will do 20 bbls.; on Section 26-40-79 another second Wall Creek well that started off at 105 bbls. without a shot; on Section 35-40-79, the same company has a producer in the first Wall Creek sand good for 550 bbls. at 1,315 feet; on Section 23-40-79, a second Wall Creek well at 2,440 feet that will do 30 bbls; on the same section another second sand well good for 15 bbls. at 2,433 feet, and another on the same section in the same sand good for 25 bbls. at 2,465 feet. On the same section this company has a well at 1,250 feet that will make 15 bbls.

The Midwest Oil Co. completed two wells on Section 34-40-79; the first one will make a pumper after a shot at 1,485 feet and the second will make a small well at 1,884 feet. This company also completed a producer on Section 1-39-79 to the second Wall Creek sand at 2,035 feet, and will have a 20-bbl. well. Another by the same company on Section 27-40-79 found production at 1,280 feet and will make a pumper. The same firm completed two producers on Section 35-40-79, both to the second Wall Creek sand; one at 2,130 feet will make a pumper of 25 bbls. and the second at 2,310 feet will make 20 bbls.

The Wyoming Oil Fields Co. has a producer good for 15 bbls. on Section 23-40-79 at 1,035 feet. The same company has a producer on Section 19-40-78 in the second Wall Creek sand that came in at 2,059 feet and the well is good for 25 bbls.

The Salt Creek Consolidated Oil Co. has a producer on Section 11-39-79 in the second Wall Creek sand that is good for 25 bbls. and found the sand at 2,297 feet. This company also has a new producer on Section 34-40-79 that started off

at 1,950 bbls. from the second Wall Creek sand at 2,491 feet.

The Utah Oil & Refining Co. on Section 30-40-78, has a producer good for 25 bbls. in the second Wall Creek sand at 2,075 feet.

Runs for the Week

Salt Creek	60,360
Teapot	1,250
Big Muddy	3,320
Grass Creek	2,860
Elk Basin	710
Greybull	20
Rock River	3,380
Lance Creek	2,100
Poison Spider	890
Osage	280
Hamilton Dome	480
Lander Fields	150
Byron	40
Pilot Butte	30
Lost Soldier	4,410
Farris	60
Hogback	520
Cat Creek	3,320
Sunburst	15,450
Florence	400
Moffat	2,640
Fort Collins	1,509
Rattlesnake	272
Boulder	35
Rangeley	100
Tow Creek	110
Artesia	4,400
Total	109,102

NORTH CENTRAL TEXAS

(Continued from Page 48)

Dale and others' No. 1-B Keathley, dry at 997 feet; Golding and others' No. 1 Howard, dry at 1,176 feet; Madden and others' No. 1 Kumkel, dry at 1,215 feet; Shasta Oil Co.'s No. 1 Winkler, dry at 1,350 feet; The Texas Co.'s No. 1 Moore, dry at 1,246 feet; Texas Unitiy Oil Co.'s No. 2 Sloan, dry at 1,014 feet; Texas Unity Oil Co.'s No. 3 Sloan, dry at 1,016 feet; Texhoma Oil & Refining Co.'s No. 11 Campbell, 245 bbls. at 884 feet; Texhoma Oil & Refining Co.'s No. 12 Campbell, 125 bbls. at 891 feet; Tidal Oil Co.'s No. 4 Campbell, 30 bbls. at 927 feet; Tidal Oil Co.'s No. 5 Campbell, dry at 935 feet; Wilson and others' No. 1 Anderson, dry at 1,074 feet.

Stephens County

Moorman and others' No. 2 McClesky, dry at 3,750 feet.

Eastland County

Robert Oil Corp.'s No. 1-B Pettit, 100 bbls. at 1,489 feet; Corzelius Brothers' No. 1 Dulin, 40 bbls. at 3,462 feet.

Brown County

Conway Brothers' No. 2 Wooldridge, 10 bbls. at 1,267 feet; Prairie Oil & Gas Co.'s No. 9 Gaines, 15 bbls. at 1,288 feet; Simms Oil Co.'s No. 3 Gaines, 15 bbls. at 1,286 feet.

Reagan County

Big Lake Oil Co.'s No. 48 University, 1,440 bbls. at 2,921 feet; Texon Oil & Land Co.'s No. 30, Group 1, University, 925 bbls. at 3,026 feet; Texon Oil & Land Co.'s No. 30, Group 1, University, 965 bbls. at 2,995 feet.

Other Counties

Callahan County—Brannon and others' No. 1, Block 23, 800 bbls. at 1,459 feet; Brothers and others' No. 1 Block 53, 100 bbls. at 1,449 feet; Cranfill and others' No. 1 Block 80, dry at 1,454 feet; Kirk and others' No. 1 Block 22, 975 bbls. at 1,459 feet; Kirk and others' No. 1 Block 29, 75 bbls. at 1,474 feet; Sudderth and others' No. 1 Thorn, 1,000,000 feet of gas at 1,369 feet; Weiler Brothers and others' No. 1 Block 35, 100 bbls. at 1,459 feet.

Hutchinson County—Gibson and others' No. 1 Whittenburg, 240 bbls. at 2,930 feet; Roxana Petroleum Co.'s No. 1 Smith, 115 bbls. at 2,960 feet.

Wheeler County—Shedden and others' No. 1 Westmoreland, dry at 3,003 feet; Vaughan and others' No. 1 O'Gorman, 12,000,000 feet of gas at 1,875 feet.

Baylor County—Petroleum Production Co.'s No. 4 Mills, 75 bbls. at 1,416 feet; Southern Exploration Co.'s No. 1 Michna, dry at 2,014 feet.

Montague County—Texhoma Oil & Refining Co.'s No. 2 Rowland, 55 bbls. at 843 feet.

Throckmorton County—Associated Petroleum Co.'s No. 2 Cummings, 150,000 feet of gas at 540 feet; Smith Oil Co.'s No. 1 Burkhaulter, dry at 1,847 feet.

Palo Pinto County—Upham Gas Co.'s No. 4 Belding, dry at 4,128 feet.

Mitchell County—California Oil Co.'s No. 1 Miller, 120 bbls. at 3,080 feet.

Coleman County—Duncan and others' No. 1 Morris, 8,000,000 feet of gas at 1,681 feet; Cranfill and others' No. 1 Kelly-Grady, dry at 1,518 feet.

Wichita County Drilling

Bridwell and others' No. 1 Miller, drilling at 1,250 feet; Burt and others' No. 1 Hansard, 1,140 feet; Fisher and others' No. 9 Birk, 1,200 feet; Loning and others' No. 1 Riley, 682 feet; Magnolia Petroleum Co.'s No. 8 Holtzen, testing at 1,891 feet; No. 119 Reilly, drilling at 1,020 feet; No. 122 Reilly, 1,750 feet; No. 124 Reilly, 1,215 feet; Texhoma Oil & Refining Co.'s No. 1-A Beach, 1,350 feet; Whibert Oil Co.'s No. 1 Davis, 985 feet; White and others' No. 1 McClure, fishing at 2,250 feet; Shappell Oil Co.'s No. 36 Jackson, cementing at 1,800 feet; Simms Oil Co.'s No. 3 Dutton, cementing at 1,824 feet; Allen and others' No. 1 Ancell, drilling at 1,000 feet; Appel and others' No. 16-A Jennings, 800 feet; Beaudoin and others' No. 1 Snow, 1,150 feet; Biggs Oil Co.'s No. 12 Fisher, 300 feet; Bullington and others' No. 11 Jennings, sand at 1,594 feet; Compton Oil Corp.'s No. 1 Hirschi, drilling at 2,350 feet; Cooper and others' No. 1 Overby, 1,688 feet; Dale Oil Corp.'s No. 17 Jennings, 1,400 feet; Dale Oil Corp.'s No. 18 Jennings, 700 feet; Electra Gulf Oil Co.'s No. 7 Murray, 900 feet; Hammon and others' No. 5 Waggoner Brothers, sand at 1,730 feet; Hammond and others' No. 3 Burnett, drilling at 1,300 feet; No. 1 Honoker, 1,860 feet; Jones and others' No. 3 Jennings, 1,800 feet; K. M. A. O. Co.'s No. 23 Munger, 1,600 feet; Madison Oil & Gas Co.'s No. 12 Burnett, 700 feet; Magnolia Petroleum Co.'s No. 66 Allen, 1,265 feet; No. 69 Honaker, 1,595 feet; No. 32 Maer, 495 feet; No. 33 Maer, 792 feet; No. 13-A Pratt, 800 feet; No. 52 Rio Bravo, 1,310 feet; No. 53 Rio Bravo, 225 feet; No. 10 Watkins, spudding; O'Donohoe and others' No. 2 Pratt, fishing at 1,595 feet; Patterson and others' No. 4 Fisher, drilling at 700 feet; Perkins and others' No. 2 Beaver-Electra, sand at 1,608 feet; Perkins and others' No. 1 Munger, drilling at 1,280 feet; Pois and others' No. 2 Waggoner, sand at 1,600 feet; Pois and others' No. 10 Waggoner, drilling at 1,250 feet; Ryan Petroleum Co.'s No. 2 Henson, fishing at 1,621 feet; No. 48 Nance, drilling at 200 feet; Staley and others' No. 1 Marshall, 1,600 feet; Texhoma Oil & Refining Co.'s No. 1 Ferguson, 661 feet.

Wilbarger County Drilling

Barkley and others' No. 8-A Stephens, drilling at 1,900 feet; No. 9-A Stephens, 1,200 feet; No. 2-B Stephens, 900 feet; Bridwell and others' No. 1 Servatius, 2,375 feet; Continental Oil Co.'s No. 8 Zipperle, 1,650 feet; Graham and others' No. 1 George Co., 1,889 feet; Herbert Oil Co.'s No. 1 Waggoner, 2,100 feet; Humble Oil & Refining Co.'s No. 1 Castlebury, sand at 2,099 feet; No. 21 Castlebury, drilling at 2,212 feet; No. 22 Castlebury, 1,700 feet; No. 23 Castlebury, 220 feet; No. 6 Stephens, 2,252 feet; No. 22 Stephens, 2,027 feet; No. 27, 2,396 feet; No. 31 Stephens, showing oil at 2,328 feet; No. 23-A Stephens, lime at 2,344 feet; No. 38 Stephens, drilling at 1,015 feet; No. 39 Stephens, 1,522 feet; No. 4-G Waggoner, spudding; No. 4-H Waggoner, drilling at 153 feet; No. 2-I Waggoner, 1,360 feet; No. 1-K Waggoner, 487 feet; No. 1-L spudding; Kolp and others' No. 11 Waggoner, drilling at 1,330 feet; Landreth Production Co.'s No. 1-A A Waggoner, 1,385 feet; No. 1-B B Waggoner, 815 feet; No. 1-C C Waggoner, 1,060 feet; No. 1-D Waggoner, 2,135 feet; No. 7-D Waggoner, 953 feet; No. 9-D Waggoner, 245 feet; No. 1-E Waggoner, 2,422 feet; No. 1-E E Waggoner, 256 feet; No. 6-F Waggoner, showing oil at 1,876 feet; No. 1-H Waggoner, drilling at 1,777 feet; No. 2-L Waggoner, spudding; No. 1-P Waggoner, drilling at 1,780 feet; No. 1-PP Waggoner, 275 feet; No. 1-Q Q Waggoner, 675 feet; No. 1-U Waggoner, 1,517 feet; Lawson and others' No. 14 Waggoner, 1,500 feet; Jim McCamey and others' No. 1 Waggoner, 1,400 feet; McCamey and others' No. 8 Stephens, 2,000 feet; No. 26 Stephens, 2,000 feet; No. 29 Stephens, 640 feet; Magnolia Petroleum Co.'s No. 70 fee, 1,775 feet; No. 1 Jiggs-Waggoner, 2,375 feet; Milham Corp.'s No. 2-A Waggoner, spudding.

Stephens County Drilling

Gardner and others' No. 2 Cunningham, drilling at 1,360 feet; Mid-Kansas Oil & Gas Co.'s No. 7 Hill, 2,110 feet; No. 8 Hill, 900 feet; Mid-Texas Oil Co.'s No. 3 Cunningham, 790 feet; No. 1 Morrison, 600 feet; Rhodes and others' No. 1 Langford, 2,190 feet; Swensondale Oil Co.'s No. 8 Cobb, fishing at 3,323 feet; Texas Consolidated Oil Co.'s No. 7 Martin, drilling at 1,962 feet; Atkinson and others' No. 1, fishing at 2,400 feet; Carter and others' No. 1 Smith, sand at 1,907 feet; Chostain and others' No. 1 Young, drilling at 300 feet; Curry Pool Oil Co.'s No. 2 Sikes, 700 feet; Edison and others' No. 1 Post, 1,720 feet; Hickok P. & D. Co.'s No. 1 Parks, spudding; Hughes and others' No. 5 Gandy, spudding; No. 1 Long, fishing at 1,082 feet; No. 1 Thompson, drilling at 900 feet; Illinda Oil Co.'s No. 1 Walker-Caldwell, showing oil at 3,260 feet; Landreth Production Co.'s No. 1 Elliott, cleaning out at 3,598 feet; No. 1 Guest, drilling at 2,155 feet; Mook-Texas Oil Co.'s No. 3 Head, showing oil at 2,127 feet; Roth and others' No. 1 Suddeth, showing oil at 3,572 feet; Scanlon and others' No. 1 Ming, drilling at 3,190 feet; States Oil Corp.'s No. 2 Cooper, showing oil at 3,734 feet; No. 3 Cooper, drilling at 3,515 feet; No. 1 Dean, 3,515 feet; Strawn Petroleum Co.'s No. 25 Stuart, 780 feet; Swensondale Oil Co.'s No. 1-B Swenson, 445 feet; Texas Pacific Coal & Oil Co.'s No. 57 Binney, testing at 1,820 feet; No. 59 Binney, drilling at 200 feet; No. 3 Hand, fishing at 3,725 feet; No. 4 Hand, drilling at 2,475 feet; No. 8 Veale, cleaning out at 4,050 feet; The Texas Co.'s No. 2 Grimes, drilling at 3,190 feet; Walker-Caldwell's No. 1 Keathley, 3,220 feet.

Eastland County Drilling

Barkley and others' No. 1 Reid, drilling at 2,970 feet; Carter and others' No. 1 Falls, 2,015 feet; Dean and others' No. 1 Dawson, spudding; Hoffer Oil Corp.'s No. 1 Thurman, drilling at 3,006 feet; Lightfoot and others' No. 3 Allen, 1,650 feet; Magnolia Petroleum Co.'s No. 7 Harris, 1,610 feet; Mahlstedt Oil Co.'s No. 1 Webb, spudding; Mid-Kansas Oil & Gas Co.'s No. 1 Williams, drilling at 3,205 feet; Teatsworth and others' No. 7 Scott, 1,420 feet; Woods and others' No. 1-B Collins, 550 feet; Adams and others' No. 1 Grove, 390 feet; Hickok P. & D. Co.'s No. 1 Amis, 1,600 feet; No. 1 Kimbrough, 1,530 feet; McBride and others' No. 1 Johnson, 542 feet; Reeves and others' No. 1 Leveridge, 3,014 feet; Root and others' No. 5 Gibbons, 400 feet.

Brown County Drilling

Adams and others' No. 1 Newton, cleaning out at 3,070 feet; Anderson and others' No. 1 Williams, drilling at 2,075 feet; Bateman and others' No. 1 Gaines, 1,636 feet; Boysen and others' No. 1 Boysen, 1,400 feet; Cosden and others' No. 1 Gaines, 900 feet; Eastland Oil Co.'s No. 1 Stone, 1,120 feet; Gillespie and others' No. 1 Gunn, 600 feet; Gray and others' No. 1 Lewis, spudding; Greenwood and others' No. 1 Westerman, drilling at 1,635 feet; Landreth Production Co.'s No. 1 Byrd, 1,360 feet; Phillips and others' No. 1 Graham, 1,180 feet; Prairie Oil & Gas Co.'s No. 10 Gaines, 870 feet; Schaffner and others' No. 4 Prather, fishing at 900 feet; No. 5 Prather, drilling at 400 feet; Simms Oil Co.'s No. 4 Gaines, spudding; Williamson and others' No. 1 Newton, showing oil at 1,218 feet; Hart and others' No. 1 Brooks, drilling at 810 feet.

Wildcats Drilling

Callahan County—Brannon and others' No. 1 Block 4, drilling at 630 feet; No. 1 Block 5, spudding; No. 1 Block 14, spudding; No. 1 Block 28, drilling at 290 feet; No. 1 Block 44, spudding; No. 1 Block 45, drilling at 1,290 feet; Cranfill and others' No. 1 Barr, 1,586 feet; No. 1 Block 27, spudding; No. 1 Smith, drilling at 1,060 feet; Harris and others' No. 1 Block 12, setting casing at 1,437 feet; Hornbeak and others' No. 1 Brigner, drilling at 1,280 feet; Mitchell and others' No. 1 Block 15, 790 feet; No. 1 Block 20, 1,400 feet; McCamey and others' No. 1 Strahan, 1,020 feet; Mook-Texas Oil Co.'s No. 1 McDonough, spudding; No. 5 McDonough, drilling at 1,200 feet; Petroleum Exploration Co.'s No. 1 Smart, 250 feet; Root and others' No. 1 Block 1, 2,200 feet; Weiler Brothers' No. 1 Block 32, spudding; No. 1 Block 36, drilling at 1,200 feet.

Montague County—Benton and others' No. 1 Hinds, sand at 957 feet; Pure Oil Co.'s No. 4 Maddox, cementing casing at 928 feet; Texhoma Oil & Refining Co.'s No. 6 Howard, drilling at 1,147 feet; No. 3-A Rowland. 372 feet.

Cooke County—Big Indian Oil Co.'s No. 1 Lester, cementing casing at 3,657 feet; Simpson and others' No. 1 Houston, drilling at 1,925 feet; Sun Oil Co.'s No. 1 Ludeman, 3,000 feet.

Throckmorton County—Associated Petroleum Co.'s No. 1 Cummings, drilling at 3,085 feet; Humble Oil & Refining Co.'s No. 2 Stubblefield, running casing at 3,198 feet; Larkin and others' No. 1 Richards, drilling at 4,195 feet; Magnolia Petroleum Co.'s No. 1 Davis, 3,525 feet; Red Bank Oil Co.'s No. 1 Parrott, 1,045 feet; Reiter-Foster's No. 2 Stubblefield, 3,360 feet; Southern Exploration Co.'s No. 1 Stevens, 1,870 feet; Texhoma Oil & Refining Co.'s No. 3 Reynolds, setting casing at 2,455 feet.

Shackelford County—Brigham Oil Co.'s No. 1 King, drilling at 260 feet; Carter and others' No. 1 Proctor, underreaming Gillespie and others' No. 1 Davis, underreaming; Hope Petroleum Co.'s No. 1 Green, drilling at 880 feet; No. 6 Reynolds, 1,040 feet; Humble Oil & Refining Co.'s No. 1 McLemore, 3,715 feet; Lake and others' No. 1 Black Brothers, 1,095 feet; Phillips Pteroleum Co.'s No. 9 Parrish, 1,795 feet; No. 1 Smalley, 2,100 feet; Roeser and others' No. 1 Cook, underreaming; The Texas Co.'s No. 1 Green, spudding; United Mutual Oil Co.'s No. 1 Reynolds, fishing at 1,280 feet; Zeigler and others' No. 1 McKeener, drilling at 1,045 feet.

Mitchell County—Atlantic Oil Producing Co.'s No. 2 Womack, drilling at 2,875 feet; Morrison and others' No. 1 Hyman, 400 feet; Magnolia Petroleum Co.'s No. 1 Coleman, fishing at 705 feet; No. 1 Watson, drilling at 2,010 feet; No. 2 Adams, 3,072 feet; California Co.'s No. 10 Abrams, 2,704 feet; No. 1 Swenson, 310 feet.

Howard County—Deep Rock Oil Co.'s No. 1 Scott, fishing at 2,640 feet; Marland Oil Co.'s No. 1 O'Daniel, cleaning out at 3,103 feet.

Culberson County—Pure Oil Co.'s No. 1 Quaid, reaming at 1,900 feet.

Glasscock County—Marland Oil Co.'s No. 1 Mook, drilling at 1,260 feet.

Sterling County—Harty and others' No. 1 Reynolds, fishing at 630 feet; Rummel and others' No. 1 Clark, underreaming; White Eagle Oil & Refining Co.'s No. 1 Mills, drilling at 2,573 feet; Co-Operative Lease & Development Co.'s No. 1 Douthit, 225 feet.

Coleman County—Bateman and others' No. 1 Morris, spudding; Canary and others' No. 1 Morris, setting casing at 2,150 feet; Gilman and others' No. 1 Aston, drilling at 705 feet; Gwynn and others' No. 1 Dibrell, spudding; Mahlstedt Oil Co.'s No. 1 Atkinson, drilling at 390 feet; McCamey and others' No. 1 Howe, 1,200 feet; McLester Oil Co.'s No. 1 McDermitt, 1,300 feet; Merry Brothers' No. 1 McClellan, 530 feet; Wright and others' No. 1 Hutchings, spudding; Gladys Belle Oil Co.'s No. 3 Watson, drilling at 1,600 feet.

Upton County—Dixie Oil Co.'s No. 1 Johns-Burleson, coring; Kirby Petroleum Co.'s No. 1 Union Land Co., drilling at 2,054 feet.

Reeves County—Deep Rock Oil Co.'s No. 1 Tatum, drilling at 884 feet; Schooler and others' No. 1 Abrams, 300 feet; World Oil Co.'s No. 1 Kloh, 500 feet.

Pecos County—Dixie Oil Co.'s No. 1 Herschenson, drilling at 950 feet; Transcontinental Oil Co.'s No. 1 Perry, underreaming.

Crockett County—Cook and others' No. 1 University, fishing at 3,224 feet; No. 1 Todd, drilling at 800 feet; Crockett Drilling Syndicate's No. 2 Shannon, 1,295 feet; Humble Oil & Refining Co.'s No. 3 Powell, 750 feet; No. 1 Sorg, spudding; Marland Oil Co.'s No. 1 Todd, drilling at 1,413 feet; Wade and others' No. 1 Powell, spudding.

Val Verde County—Independent operators' No. 1 Whitehead, drilling at 2,350 feet; Williams and others' No. 1 Moore, 440 feet.

Oil Securities Very Active and Strong

New Highs Recorded in Several Issues. Financial Statements of Leading Companies Attract Attention

By N. O. Fanning
Room 548, 30 Church St., New York

NEW YORK, Dec. 7.—Oil securities were very active and strong with new highs recorded in several issues.

There were several interesting dividend announcements during the past week, including initial payments, resumptions and extras.

The South Penn Oil Co. resumed dividend pyaments with a declaration of $1.50 per share, payable December 31 to stockholders of record December 10. The last quarterly payment of $1.50 was made September 30, 1922.

The Big Lake Oil Co. declared a dividend of 20 per cent in cash, payable December 17 to stockholders of record December 15. The Texon Oil & Land Co. owns 25 per cent of the stock of the Big Lake company and the remainder is owned by the Plymouth Oil Co.

The Swan-Finch Oil Corp. (formerly Swan & Finch Co.) has declared a dividend of 6 per cent on account of accumulated dividends on the $25 par value 8 per cent preferred stock, payable January 12 to stockholders of record December 29. This completes the payment of arrears at the 8 per cent rate, which was in effect until June 1, 1924, when the rate was reduced to 7 per cent annually. Dividends accrued since June 1, 1924, at the 7 per cent annual rate totaled 10½ per cent up to December 1, 1925.

The Oil Well Supply Co. has declared a dividend of 50 cents per share on the common stock, payable January 2 to stockholders of record December 15, this being the first payment on this stock since reclassification.

The Washington Oil Co., a former Standard Oil subsidiary, has declared a dividend of $2 per share, payable December 31 to stockholders of record December 15. This is the first dividend that has been declared since January 31, 1921, when $2 was paid on the $10 par value stock. A special meeting of stockholders will be held February 15, 1926, to vote on an increase in the authorized capital stock from 10,000 shares of $10 par value to 20,000 shares of $25 par value. It is the intention of the directors to declare a 300 per cent stock dividend. Holders of record December 15 will be entitled to vote at the meeting.

The Standard Oil Co. of New York has confirmed reports that it will declare a stock dividend of 25 per cent after consummation of the merger with the Magnolia Petroleum Co.

The Royal Dutch Co. has declared an interim dividend of 10 per cent, payable January 5. This is the same amount as the last previous interim payment.

The Shell Transport & Trading Co. has declared an interim dividend of 10 per cent, or 2s., payable January 5, 1926, free of tax. This is the same amount as the last previous interim payment.

The Anglo-American Oil Co. has declared an interim dividend of 1s. 6d., equivalent to 36 2-5 cents, payable January 4 on coupon No. 31. This is the same amount as the last previous interim payment.

Anglo-Persian Oil

The Anglo-Persian Oil Co. has registered a private company known as the Khanaquin Oil Co. with nominal capital of £1,000,000 to acquire oil-bearing lands in the Kingdom of Iraq. The British treasury has power to appoint two ex-officio directors of the new company. The company intends to develop concessons granted the Anglo-Persian Oil Co. in 1923 at Naft Khana on the borders of Persia and Iraq, which oil areas are already proven.

Indian Refining

The Indian Refining Co. has enlarged its board of directors from 9 to 11 by electing B. H. Anglin and Frank Frittz. Both were also made vice presidents. A new 6,000-bbl. pipe still for cracking gasoline has been placed in operation and work is starting on a second still.

The company has sold to the Sun Oil Co. its Chicago gasoline stations and distributing business and is moving district marketing headquarters to Joliet, Ill.

British Controlled Oil Fields

The voting trustees of the British Controlled Oilfields, Ltd., have elected Lord Buckmaster as chairman to succeed Sir E. Mackay Edgar. Colonel Medlicott has also been elected to the board of directors.

Independent Oil & Gas

The Independent Pipe Line Co. has been organized with capital of $300,000 to handle the crude oil production of the Independent Oil & Gas Co. The company plans construction of lines connecting Independent's producing properties with its refinery at Okmulgee, Okla.

Standard Oil-Humble Oil

Final arguments before the Federal Trade Commission in the case of the United States against the Standard Oil Co. of New Jersey have started at Washington. The Government charges the company in acquiring more than one-half of the capital stock of the Humble Oil & Refining Co. in 1919 violated the provisions of the Clayton act.

New Highs

New high prices for 1925 were established in many oil securities during the past week. The following are included: Associated Oil, Panhandle Producing & Refining common, Imperial Oil, Ltd.; International Petroleum, Ltd.; Marland Oil and Indian Refining.

Sinclair Consolidated

Resumption of common dividends by Sinclair Consolidated is forecast, some reports placing the possible rate at $2 per share per annum, to be inaugurated early next year.

Oil Supply Securities

There are now two oil well equipment securities listed on the New York Stock Exchange. They are Oil Well Supply and National Supply. Both stocks have been unusually inactive for some time, but it is expected these companies will share in any improvement in the oil business which may occur. Both concerns are in excellent financial condition and have shown strong earning power.

Oil Well Supply preferred, paying 7 per cent annual dividends on $100 par value shares, is considered a good investment at the current price, $105 per share.

Oil Well Supply common is considered as on a $2 annual dividend basis, while National Supply common is on a $3 annual basis. At current quotations Oil Well Supply yields 5.5 per cent and National Supply 5.3 per cent.

An interesting fact in connection with the oil well equipment business is that the drilling activity in the United States since 1920 has been considerably smaller than in that year when approximately 35,000 wells were drilled. A downward tendency in crude oil production followed by increased oil prices would, it is believed, result in activity exceeding that of 1920.

The export field is one of the biggest in potentialities from the viewpoint of oil well equipment. Almost every cargo vessel leaving New York for the Far East or South American carries some equipment. Recent shipments have been made to Japan, Australia, Venesuela, Peru, Colombia and numerous other countries, including those of Europe.

ORGANIZERS UPHELD IN PLYMOUTH CASE

PITTSBURGH, Pa., Dec. 5.—Declaring that "by the exercise of keen vision and shrewd judgment the organizers of the Plymouth Oil Co. had acquired tremendously valuable assets and had turned them over to the company at 'much less than they were worth'," Chancellor Wolcott of Delaware held in a lengthy opinion denying the application of William Henderson and others, of Pittsburgh, for a temporary injunction, "that it would be highly inequitable to hold that the shares of stock now standing in the name of the defendants do not belong to them."

The chancellor orders that the rule be discharged and the restraining order issued vacated. Attorneys for Henderson and his associate complainants appeared before the chancellor and asked they be given until December 9 to determine their further action. This extension was granted without protest by the attorneys for the company.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	§Dividend Rate	Clos. Quot. Dec. 7	Clos. Quot. Nov. 30	1925 High	1925 Low	1924 High	1924 Low	1923 High	1923 Low
American Republics	..	..	66¾	*63	76	48	48	25	..	..
Associated Oil	25	8	44⅞	40⅛	44⅝	32	34⅝	27⅝	29¼	29½
Atlantic Ref., com.	100	..	109	108	117½	95½	140½	78½	100	98¾
Barnsdall "A"	25	..	27⅝	25	30	18¾	29¾	14	27	9⅞
California Pet., com.	25	7	31⅞	31	32⅞	23⅞	29	19⅝	28½	17½
General Petroleum	25	8	52¼	49	59	42	45	38¾	..	..
Houston Oil	100	..	71	69	86	59	82½	61	78	40¾
Independent Oil & Gas	..	†1	33¾	30¾	41¾	13½	16¾	5¾	11¼	3⅝
Indian Refining	10	..	13	9	10¾	6½	7	3¾	8½	4
Louisiana Oil	10	..	17⅝	16⅜	32¾	13¾	..	..	..	..
Maracaibo	..	..	25¼	25	35½	20⅝	37⅛	25⅝	28¼	16
Mariand	..	†3	59	58	60½	32½	42	29	50⅝	18½
Mexican Seaboard	..	..	10⅝	10¾	22½	10⅝	25⅝	14½	19⅝	5⅝
Mid-Continent Pet.	..	..	36⅝	36¼	38	25⅝	40¼	22⅝	62¼	23⅝
National Supply	50	6	56	56⅝	71	55½	72⅛	54	68	54
Oil Well Supply	..	..	24⅝	25⅝	..	..	..	..	..	..
Pacific Oil	..	†3	60⅝	59⅝	65¼	51¾	58¼	45	52½	31½
Pan Amer. P. & T., com.	50	12	76½	72	83⅝	61	65	44¼	93½	53
Pan Amer. Western "B"	..	x50	43¼	42	47	37¼	..	..	..	..
Phillips Pet.	..	†2	45¼	43	47½	36¼	42¼	28½	69⅝	19⅝
Producers & Refiners	50	..	14⅜	14⅜	32½	13½	43½	29⅝	58¼	17½
Pure Oil, com.	..	6	26⅝	26⅝	33⅝	25¼	30¼	20	23	16¼
Royal Dutch, N. Y., sh.	13.40	4.42	54⅝	53⅝	57⅜	48¼	59¾	40⅝	55½	40½
Shell Transport	10	2.30	46⅝	45¼	45⅝	39⅝	42	32	41¼	29½
Shell Union, com.	..	†1.40	26½	24⅝	38⅝	21⅝	33½	15⅝	19¼	12⅝
Simms Pet.	10	..	23⅝	23½	26⅝	17⅜	24	10⅝	16⅝	6⅛
Sinclair Consolidated, com.	..	..	21¼	20	44⅞	17	27⅛	15	29⅝	16
Skelly Oil	25	..	31⅜	30½	33⅞	21⅜	33	17⅛	35	12⅛
Standard of California	25	8	56	55⅝	67¼	61⅜	63⅛	55½	64⅛	47½
Standard of N. J., com.	25	4	44	43	47½	38⅝	42¼	33	44¼	30⅝
Sun Oil Co.	..	1	39½	39⅛	46⅝	33⅝	..	..	..	..
The Texas Co.	25	12	52⅝	53	54⅝	42⅜	45⅝	37⅜	62⅞	45⅝
Texas Pacific Coal & Oil	10	..	16	15⅜	23⅝	11	15¼	8½	23⅝	5⅛
Tide Water Oil (new)	..	4	36½	36½	2153	123	151	116¼	144	94
Transcontinental	..	..	4⅛	4⅝	5⅞	3⅛	6¼	3⅝	14¼	1¼
Union Oil of California	25	7.3	38¼	35⅝	43⅝	33¼	39	35⅝	..	..
Union Tank, com.	100	5	*127	128	134	118	132⅞	94	114	106
White Eagle Oil & Ref.	..	2¼	27⅝	27¼	31⅝	25⅝	29⅝	23¼	30⅝	29½
Standard Oils										
Anglo-American Oil	£1	35	18	17¼	26⅜	13	18⅝	14⅝	19⅜	13½
Borne Scrymser	100	12	*323	*323	340	205	264	150	153	110
Buckeye Pipe Line	50	14	54½	*68	72	54	55½	51	94	57½
Chesebrough Mfg. Co.	25	14	*65½	67⅛	74	48¼	52½	29¼	340	205
Continental	10	10	25⅝	24⅛	31⅛	21⅜	..	..	..	..
Crescent Pipe Line	25	..	*63	16	17½	10	20	11⅛	25	15
Cumberland Pipe Line	100	12	139	140	155	128	148	108	117	80
Eureka Pipe Line	100	8	65¼	*67	86	70	105	74	117¼	87
Galena Signal, com.	100	..	36	38	53⅛	34½	59¾	52½	78	55
Humble Oil & Refining	25	4.8	79⅝	74⅜	76	42½	43⅝	36	41	28¼
Illinois Pipe Line	100	12	133	135	154½	127	161	123	171	115
Imperial Oil (Ltd.)	..	†3	36⅜	34¼	37⅝	27¼	119	99	123	93
Indiana Pipe Line	50	3	61	62½	84	60	110	66	103	81
International Pet. Co.	10	x50	35	31⅝	35⅝	22¼	24⅝	16⅜	24⅜	13¼
Magnolia Pet. Co.	100	4.5	*185	181½	186	130⅛	162	125	166	123
National Transit Co.	12.50	16	17¼	13½	25⅛	19½	25⅞	20⅝	20	19⅛
New York Transit	100	3	52	54½	79	50	97	54½	138	70
Northern Pipe Line	100	6	80¼	*80	88	70	107⅛	72	111	96
Ohio Oil Co.	25	8	64	64¼	75¼	60	79½	53	85⅝	48¾
Penn.-Mex. Fuel	25	..	23⅛	*23	44	20	35⅝	27	45	10½
Prairie Oil & Gas	25	32	56	55¾	65½	45⅝	269	193	272	152
Prairie Pipe Line	100	8	136	128⅝	137½	106	111	100	117	93
Solar Refining Co.	100	15	*210	*215	259	200	249	170	212	161
South Penn Oil	100	..	171	169	197	139	176	117	196	100
Southwest Pa. Pipe Line	100	6	57½	57	84	52	89	68	89	66
Southern Pipe Line	100	4	86½	*69	103	67½	100	80¼	116	87
Standard of Indiana	10	10	66⅝	64¼	70	59½	69⅝	54¼	69⅞	48½
Standard of Kansas	25	..	34	33	46	30¼	50⅛	32½	56¼	36½
Standard of Kentucky	25	16	134⅝	*133	137	114⅝	121⅞	101	109⅛	76
Standard of Nebraska	100	20	242	*241	270	231	262	198	380	166
Standard of New York	25	5.6	46⅝	45⅝	48⅝	40	48	37⅜	49⅝	35½
Standard of Ohio, com.	100	10	364	*362	369	338	327½	277	320	270
Swan & Finch, com.	25	..	19¼	*18	27	13	28	20	..	..
Vacuum Oil	25	†3.75	101⅝	100⅛	105⅛	80⅛	88½	80⅛	66⅛	40
Washington Oil	..	..	*33	*33	35	30	30	26	28	20¼
Miscellaneous										
Gulf Oil Corp. of Pa.	25	6	84½	82⅜	84⅞	62½	67⅝	56	68¼	45⅝

*Bid, no sales. †In dollars. §The figures in this column are kept up to date as far as possible, but are not guaranteed. xCents per share. ‡Old stocks.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Dec. 7	$7.99	Nov. 2	$6.67	Sept. 28	$1.29		
Nov. 30	6.93	Oct. 26	6.61	Sept. 21	1.65		
Nov. 23	6.49	Oct. 19	6.03	Sept. 14	6.02		
Nov. 16	6.31	Oct. 12	6.18	Sept. 6	1.18		
Nov. 9	6.47	Oct. 5	6.94	Aug. 31	1.16		

When Counsel Is Needed

There are over seven hundred public appraisers and appraisal organizations in the United States. ¶The selection of one to perform the important function of fixing the value of one's property is not a thing to be lightly considered. ¶The prudent executive retaining appraisal service for the first time will usually write to some of the country's more prominent Bankers, Public Accountants, Insurance Agents and Attorneys. ¶He will ask them for the names of the most reliable, capable and recognized appraisal organizations. ¶He will engage the one whose name is most frequently mentioned in the replies he receives. ¶He will have made a safe selection.

THE AMERICAN APPRAISAL COMPANY

A NATIONAL ORGANIZATION

Dallas, Mercantile Bank Building

VALUE IS A MEASURE OF COMPARATIVE DESIRABILITY

EYES OF OIL INDUSTRY ARE ALWAYS AWAKE

(Continued from Page 32)

week in several important tests. If his territory happens to be in an area where core drills are active and his company is not large enough, or for some reason does not employ a core drill scout, these hasty perforators add to his grief and he must attempt to keep up with their activities.

It has been stated by some anonymous authority that Henry Ford has caused more kidney trouble than any other man in the world. Ask any scout, he knows. The Dodge brothers, perhaps, run Henry a close second and third, respectively, and these two families have just about monopolized the transportation of scouts.

While driving about the country in one of these high-powered cars, enjoying the beautiful scenery such as the average oil locality affords, the scout can amuse himself by watching for new rigs and inquiring about attempts to assemble blocks of acreage, the activities of geological parties, lease hounds, the prices paid for leases in current transactions, and any other loose information that happens to lying about, such as the laying of new pipe lines or gathering lines, new connections made by pipe-line companies, etc.

When a dry hole has been completed to the contract depth and his company has to "kick in" with some dry-hole money, the scout in that district is usually called upon to witness the measurement of the well. A few years ago, in Oklahoma, a superintendent's word was generally required in such cases before payment was made, but nowadays a scout's signature to a letter, stating the depth of the hole and the fact that he witnessed the measurement, is all that is necessary in most companies. Some, however, require an affidavit, but that is more or less a matter of form. The money thus paid out solely on the word of scouts amounts to hundreds of thousands of dollars yearly.

Numerous Odd Jobs

In odd moments, when the scout has nothing else to do, he may be called upon to help out the land and lease department, either in the renewal of leases about to expire or in securing new ones. He has innumerable odd jobs to do in connection with his own company's leases, and being something of a practical geologist himself, he is always on the lookout for likely acreage.

In districts where there are many negro farmers, leasing problems are complicated in many ways, and the scout with a southern accent comes in handy. It is a ticklish job requiring the greatest of diplomacy, tact and careful judgment to overcome the superstitions and prejudices that some negro farmers have, and to circumvent their native shrewdness as well. Such tasks frequently fall to the lot of the scout although not a part of his regular work.

The evolution of scouting has not been as regular as that of other branches of the business. Many good men and true have performed the duties of scouts although they didn't travel under that name. According to a book entitled "Oil Scouts," written by J. C. Tennent and published in 1915 by the Derrick Publishing Co., "The oil scout, now a memory, was called into action during the excitement of the later '70s and early '80s following the conquest of the northern oil fields (in Pennsylvania) and marking the return of the oil operator to the abandoned white sand areas, via Cherry Grove, Thorn Creek, through southwestern Pennsylvania to Ohio, West Virginia and Kentucky. . . .

"The movement was one formed by large producers and prominent operators in the speculative field for protection against raids on the market by short interests, at this time important and formidable. The qualifications of the scout were integrity, industry and vigilance.

Purpose of the Scout

"The purpose of the scout was to checkmate false rumors started by market breakers to influence prices on 'change', invariably associated with bear movements originating with cliques in the Oil Exchange. With the scouts on duty, rumors without substance, in fact, did not get far enough to do any damage, and panics were not possible. Though a costly experience to many, the scout saved the general trade thousands and millions of dollars, by holding market manipulators in check."

The first "check meeting" is described in this book of reminiscences, and how the name scout came to be applied to these "Night Riders of the Hemlocks," forerunners of the present "Night Riders of the Flivvers."

"Meantime," the story runs, "the false reports circulating in the exchanges had become pestiferous. For their own protection, the leading interests in the trade adversely affected by the rumors, employed trained men to watch the oil fields and report daily on conditions. These scouts foregathered for the first time at Kinzua and kept watch on its mystery of the Dew Drop. * * * The title of Scout did not then premanently attach to those nomads until Cherry Grove days when the membership was augmented by brokers, drillers, operators, managers such as 'Op Vandergrift, Mike Murphy, Andy Gartlan. The men who prowled by night among the hemlocks and rode by day were then called 'Oil Scouts.' The name was well applied and it stuck. The strategy and tactics to despoil owners of the mystery of their wells so fully recognized during the speculative period was first brought into play at Dew Drop."

First Check Meeting

"That well was surrounded by a cordon of armed guards employed by the owners. These were offset by unarmed watchers consisting of scouts. Posted at hotels and livery barns were other scouts who observed all who came and went by night and day. J. P. Cappeau, then a cub in his teens with a thin veneer of Morse in his sytem, was posted at the telegraph window and amused himself by taking surreptitiously from the ticker all incoming and outgoing messages.

"A comparison of notes was made at the end of each day (the first check meeting) by all watchers and the results reported to principals. * * * The seige continued for several weeks before the secret was disclosed and a sample of fresh oil obtained from the casing head and other useful data touching depth was obtained from the size of the coil on the bullwheel shaft, through a daring burglary by Thomas McKeon, better known as "Black Tom," aided and abetted by a militant scout, in the darkest hour of night. * * * Having mastered the mystery, the scouts disappeared noiselessly as fog before the rising sun. The Dew Drop mystery did not cost the trade a penny; the mere presence of a scout force at the point where the market-smasher was expected to break loose exercised a wholesome deterrent effect on market disturbers.

"The development of the oil scout came swiftly as a necessity for exact information, daily and hourly, of current field events, following the rapid expansion of the industry from 1878-79 in connection with the opening of the rich Bradford oil fields. Speculation in oil was in full swing and every oil exchange was a rumor factory. * * *

"Mr. Daniel Goettel, an active floor-trader on the Oil City Exchange, was the first to recognize the necessity of daily and hourly reports from the oil fields, and placed S. B. Hughes, the noted scout, in the Bradford Field as his personal representative in the summer of 1879. This was a new departure in the economics of speculation and marks the beginning of the oil scout in action. In a very short time, Goettel had many imitators and Hughes much company. Before the close of 1882, the oil scouts numbered about 100, regular and volunteers."

In Demand Today

The oil scout is far from a memory, although at the time the above was written, the Gypsy Oil Co. was just beginning to organize its large force of scouts which at one time numbered more than 30 in Oklahoma and Kansas. The same qualities of integrity, industry and vigilance are as much in demand today as they were in the old Pennsylvania days, and must be combined with a kind of sixth sense which enables the scout to tell when he is listening to the truth.

In the present day scout's trunk may repose a handsomely engraved diploma certifying that he is a graduate of some State university, where he specialized in geology or engineering. On the other hand his only degree may have been obtained from the School of Experience but he is prepared to go to the mat with any problem arising in his work. He does his own subsurface work when a new well extends a field, informing his company whether it is high or low on structure, at the same time he reports the depth and thickness of the sand, the quantity and quality of the oil and innumerable other details. In short he gets the most general, all-around training of any class of men in the oil business, and many of tomorrow's oil company executives will doubtless be recruited from the ranks of the scouts.

OIL FIELD SCOUTS IN THE EARLY '80s

These young men with the flowing mustaches were the oil scouts of the '70s and '80s, back in Pennsylvania. Top row, left to right: S. B. Hughes, J. P. Cappeau, Jule Rathburn, John Drake. Bottom row: J. C. Tennent, Owens Evans, Dan Herron and J. C. McMullin.

D. F. CONNOLLY DIES SUDDENLY AT MEETING

(Continued from Page 38)

of Trinity Episcopal Church, the curtain was drawn across the stage and the audience slowly filed out.

David F. Connolly was born in Canada 66 years ago, but while an infant his parents moved to Titusville, Pa. He was an oil worker early in life, and while yet a young man he and his brothers removed to Rew City, McKean County, Pennsylvania, in the heart of the Bradford district and the firm of Connolly Brothers, oil producers, became one of the best known in the field. In 1892 he went to West Virginia and in 1905 removed to Oklahoma, and from that time to the end was an important figure in the oil business in the Mid-Continent and in civic affairs in Tulsa.

Mr. Connolly was for years president of the Wolverine Oil Co. and a member of the board of directors of The Texas Co. When the Wolverine Oil Co. was sold to the Royal Dutch-Shell interests he resigned the presidency and started the D. F. Connolly Agency, Inc., dealers in oil field supplies, but for a time continued his associations with The Texas Co., serving on the directorate representing the producing division of the company's vast general oil business. He was president of The Texas Production Co., which opened the Craig Field in Moffat County, Colorado, last year. Later he retired to give all his attention to the supply business.

Mr. Connolly was a man of strong personality and of noble principles. He was held in the highest respect by all who knew him and his friends, who could be counted by the hundreds, ranged all the way from the highest executives and wealthiest and most successful individuals to workers in the humblest walks in life. His acquaintanceship was so broad and the esteem in which he was regarded was so deep that the news of his death will be heard in distant places with the greatest regret.

Acute dilation of the heart was the direct cause of death.

Mr. Connolly is survived by his wife and four daughters. Henry Connolly, of Tulsa, and John Connolly, of Muskogee, both engaged in the oil business, are brothers of the deceased.

REFINING AND MARKETING

Penn Distributors of Gasoline Score Big Record For 3 Months

HARRISBURG, Pa., Dec. 7.—A total of 157,157,706 gallons of gasoline was sold by the 390 wholesale distributors in Pennsylvania during July, August and September, according to figures which have just been made public by the State Auditor General, with whom quarterly reports are filed.

Of the total amount, 75.9 per cent, or 119,298,175 gallons, was sold by the 21 distributors who disposed of more than a million gallons each. The largest distributor was the Atlantic Refining Co., which sold 48,029,402 gallons during the three months.

The 21 distributors selling more than a million gallons each were:

	Gallons
Atlantic Ref. Co., Philadelphia	48,029,402
Gulf Ref. Co., Pittsburgh	13,286,799
Sinclair Ref. Co., New York, N. Y.	8,095,870
Tidewater Oil Sales Corp., New York, N. Y.	6,383,100
J. B. Berry Sons Co., Oil City	6,202,718
Pennzoil Co., Rouseville	4,806,352
Pure Oil Co. (Marcus Hook Ref. Co.), Columbus, Ohio	3,673,998
The Texas Co., Philadelphia	3,446,704
Independent Oil Co., Altoona	3,296,218
Sun Oil Co., Philadelphia	3,175,971
American Oil Co., Balto	3,054,043
Pittsburgh O. & R. Co., Pittsburgh	2,998,993
Sterling Oil Co., Emlenton	2,097,754
Crew-Levick Co., Philadelphia	1,654,895
Emlenton Ref. Co., Emlenton	1,562,074
Waverly Oil W'ks Co., Pittsburgh	1,499,971
United Ref. Co., Warren	1,315,047
Continental Ref. Co., Oil City	1,266,550
Carnegie S. Co., Pittsburgh	1,262,361
Bradford O. & G. Ref. Co., Bradford	1,143,673
Butler Co. Oil Ref. Co., Bruin	1,045,737
Total	119,298,175

FRUIT SAVED FROM FROST WITH FUEL OIL

LOS ANGELES, Calif., Dec. 7.—Large quantities of fuel oil are being unloaded in the Redlands orange district to be used in creating heat barriers against frost. Nearly 2,500 acres of orchards have been equipped with oil heaters this year and more oil than ever before will be burned.

The fuel oil was purchased under contract for prices ranging from $1 to $1.50. It is being stored in 100,000-gallon capacity tanks scattered over the fruit district. When frost warnings are received it will be turned into the numerous oil pots around and through the orchards and lighted.

TABLES AND FORMULAE FOR OIL BURNER TESTS

A 28-page bulletin, thoroughly covering the methods and procedure in oil burner testing wherever the burners are fired under boilers or in warm air heating plants, has just been issued by the American Oil Burner Association, 350 Madison Avenue, New York, N. Y. The bulletin discusses such theoretical considerations as are needed for the practical application of the methods and procedure given, which apply for both industrial and domestic burners. One of the principal purposes of preparing the bulletin was to provide under one cover all the important tables and formulas needed in testing burners, so that those in charge of the test need not suffer the usual annoyance and loss of time due to having to use a number of handbooks or references.

Emphasis is laid on the heat balance method of test for domestic burners. By this method, with simple apparatus and few observations, the operating efficiency of an oil burner can be learned quickly with a sufficient degree of accuracy for most purposes, the bulletin states. A chart for quick determination of losses in oil combustion which will prove particularly useful is included in this manual of testing.

MERGER IN OIL CITY

OIL CITY, Pa., Dec. 5.—The merger of the Empire Oil & Grease Co. and the Empire Oil Works into one firm with the new name of the Empire Oil Works, Inc., has been effected.

The officers of the Empire Oil Works, Inc., are as follows:

President, A. L. Confer; vice president and general manager, E. W. Chase; vice president, Frederick Fair; secretary and treasurer, A. W. Scott; assistant secretary and treasurer, C. L. Kahle.

The directors of the new company will be the same as have functioned for the Empire Oil & Grease Co. in the past. They are A. L. Confer, E. W. Chase, Frederick Fair, E. R. Gnade, J. J. Rhoads, A. W. Scott, all of Oil City; T. C. Hawkey, Tidioute, and A. R. St. Clair, Ashtabula, Ohio.

ADDITIONAL PROTESTS IN EXPORT RATE CASE

The Sinclair Refining Co., the Mexican Petroleum Corp. and the North Texas Petroleum Traffic Bureau has filed petitions with the Interstate Commerce Commission asking suspension of the commission's order relating to freight rates from southwestern points to points in Louisiana, thereby joining the New Orleans Traffic Bureau and showing accord with the position of the Standard Oil Co. of Louisiana.

The commission order, intended to be effective December 10, upheld an original order that equalized freight rates as between New Orleans and Galveston, as representative Gulf ports, but excluded the Rock Island, Frisco and Katy railroads from rearrangement of tariffs under it. The exclusion was the basis of the petitions of protest, which asks for a rehearing. Galveston traffic interests won a victory through the exclusion. They contended the original order gave New Orleans a decided advantage over Galveston in rates on commodities intended for export.

Positions of the oil interests and the grain and milling interests of Oklahoma and Texas are contrasted in this case. Oil interests decidedly favored New Orleans preferentials, while the milling and grain interests wanted an equality of opportunity as between the ports as regards their export business. Oklahoma and Texas millers and grain dealers joined with the Galveston Traffic Bureau in its opposition to the original commission order.

FOSTER TUBE STILL'S RECORD OF ECONOMY

LOS ANGELES, Calif., Dec. 7.—In operation nearly a year continuously at more than its rated capacity and with a maintenance cost of less than $250 is the record set by a Foster tube still installation in one Pacific Coast refinery.

The refinery installed the tube stills arranged in series for step-up distillation. The design called for a 10,000-bbl. daily throughput. The plant now has been running an average of 14,000 bbls. daily for nearly a year.

In operation of the stills 10 per cent of the crude is evaporated by heat exchange recovery, the rest going to the first tube still at 250 degrees Fahrenheit, where it is heated to 450 degrees Fahrenheit. Here 17 per cent is taken overhead, the remaining oil going to the second still where it is heated to 575 degrees and 20 per cent taken off.

BUYS WOLVERINE CO.

SOUTH HAVEN, Mich., Dec. 7.—A. D. Dubuisson, manager for the trustees of the Wolverine Service Stations, Inc., of this city, has purchased the interests and control in the company from D. W. Baird, the president.

URGES RECIPROCITY IN GASOLINE TAXES

The fact that gasoline taxes vary from 1 to 5 cents a gallon with four States still not having a tax is unfair to the motorists and is hindering the development of nationwide reciprocity, according to a statement issued by the Washington, D. C., headquarters of the American Automobile Association. The association calls upon the State and local organizations to bring this unfair situation to the attention of the automobile owners.

"The wide diversity in the rate of the gas tax has produced a situation whereby the residents of one State are paying tribute to other States in the shape of gasoline taxes which are higher than the rates in their home commonwealths," Thomas P. Henry, president of the A. A. A., declares.

As viewed by the A. A. A., motorists pay the gasoline tax for the maintenance of the roads they use and an excessive charge in one State militates against the principle of reciprocity which is regarded as vital to the continued growth of motor-touring in America.

"The pyramiding of the tax in some States," says Mr. Henry, "while other States hold to a comparatively low rate is a good example of the unscientific methods of motor vehicle taxation to which the automobile owners of the country are subjected." He continued:

"There are 21 States and the District of Columbia levying a tax of 2 cents a gallon. This is the nearest approach to uniformity in taxation, but it is far from what is desired. The tax varies widely in other States and undergoes frequent revisions. Three States impose a tax of 1 cent a gallon, while there are 13 taxing at the rate of 3 cents. One State has a 2½ cents tax, two tax 3½ cents, three tax 4 cents while one, South Carolina, goes the limit at 5 cents.

"On a basis of registration and total gas tax receipts of 10 States, which are not 'resort' States, the average car used 151 gallons of gasoline for the first six months of this year and paid a tax of $3.02. For the same period, the average tax paid in Florida was $11.80. Since the tax in this State is 3 cents, the figures would indicate a consumption of 393 gallons for each car.

"The figures, however, are misleading. The difference between the taxes paid in any of the 10 non-resort States and in Florida is largely the amount of taxes exacted from tourists. Yet the Florida motor tourist can travel through Illinois, New York, New Jersey and Massachusetts without paying a penny for the use of the roads. The same is true in comparing other States.

"Rhode Island is a good example of the wide variations in taxes and taxation methods. Automobiles registered in the smallest State in the Union total 89,247, yet, despite a tax of 1 cent a gallon, tax receipts were only $45,848. This is only 51 cents for each car. What is the answer? Does the Rhode Island motorist buy only 102 gallons of gas a year or is he buying his gasoline in Massachusetts where it is tax free?

"Whether the gas tax is right or wrong, it is obvious that a variation in the tax rate automatically defeats the principles of reciprocity. If South Carolina levies a tax on the Pennsylvania motorist of 5 cents for every gallon, and Pennsylvania asks only 2 cents from the South Carolina motorist for every gallon of gas he purchases, there can be no reciprocity between the two States.

"It must be apparent that the present state of affairs is leading to unnecessary complications by tending to throw up barriers between States and is nullifying attempts to bring about reciprocity."

TEXAS GASOLINE TAXES

AUSTIN, Texas, Dec. 7.—The five leading gasoline marketing companies in Texas paid $292,119.24 in taxes to the State during October, it has just been announced. This was a decrease of $13,575.16 from September tax paid. The five companies and the taxes paid were: Gulf Refining Co., $98,201.12; The Texas Co., $63,935.58; Magnolia Petroleum Co., $79,291.43; Pierce Petroleum Co., $32,044.91; Humble Oil & Refining Co., $18,646.20. The Texas tax is 1 cent.

SHELL CO. PUTS OUT NEW WINTER GASOLINE

LOS ANGELES, Calif., Dec. 5.—The Shell Co. of California has recently brought out a new winter gasoline to compete with similar products of other companies already on the market. The situation is an interesting one to follow. The Standard Oil Co. (California) was the first this year with an extensive advertising campaign introducing their new winter Red Crown. The Union Oil Co. of California followed with similar advertising stunts and were in turn followed by several of the smaller marketing companies. The Shell Co. of California has now come into line by introducing a special, high gravity, quick-starting gasoline through its service stations. Its advertising slogan is "61 degrees Shell Gasoline" and appears on signs at its service stations, on its tank trucks and on billboards. These so-called winter gasolines are highly sweetened with natural gasoline and are in part responsible for the very heavy demand for this product at this time.

Shipments of California oils to the Gulf Coast and Atlantic Seaboard continue to hold up quite well. Local marketers are watching closely the strengthening of prices of both crude and gasoline in the Mid-Continent and eastern markets and anticipate an increase in tanker shipments as the price differential becomes more favorable for California's products.

Some of the local oil companies have made overtures to the United States Shipping Board for the purchase of tank steamers. The Board refused to sell any, stating that for fear of giving oil concerns a monopoly of the transportation of oil, no more tankers would be sold.

Generally speaking, there has been no change in the oil market during the past week. Prices remain the same. It is reported that several small refineries are feeling the effect of the present unsatisfactory price schedule, and while they continue to operate, are in serious financial straits.

COSDEN SALES CORP. APPOINTS SALESMEN

CHICAGO, Dec. 7. — W. L. Bailey, of the Waite Phillips Co., W. A. Boyden, of Roxana Petroleum Corp., W. J. McGonigle, of Sinclair Refining Co., and J. D. Curtin have accepted positions as salesmen for the Cosden Sales Corp. Mr. Bailey will cover Nebraska from Omaha; Mr. Boyden will travel southern Illinois and Missouri from St. Louis; Mr. McGonigle will cover parts of Iowa and other territory from the Chicago office, while Mr. Curtin will represent the company in northern Illinois, with headquarters at Chicago.

NEBRASKA "GAS" SALES

LINCOLN, Neb., Dec. 7.—A total of 12,185,868 gallons of gasoline were sold in Nebraska during October, according to figures compiled by State officials, based on gasoline tax receipts. At 2 cents a gallon, the State collected $243,717.36 from the tax during October. Four hundred and fifty tax reports were filed.

FIRM OR HIGHER PRICES EXPECTED BY CHICAGO MARKET OPINION

By J. B. Waldo

CHICAGO, Dec. 5.—There has been little change of importance in the Chicago market during the first week in December. The local dealers have been inclined to call the spot business light, but really there has been a very fair movement in major products. The jobbers seem more interested in the future and while ordering carefully with due regard to their actual needs are ordering what they need or what they can take in. No longer do a great majority of the steady customers of good sources of supply, be they refiners or marketers, state they are stocked up for some considerable period ahead, or that they could not take in a car if it came as a gift. On the contrary they seem to keep their storage pretty well filled and realize the market is firm, that it may advance and is not likely to decline.

Early reports as to the gallonage over November are in most cases that the jobbers have just about broken even with a year ago. Roads in the country districts are still very bad and travel off the main highways is difficult. The good road mileage is increased and the number of cars in use is larger so that in spite of less favorable weather than in 1924 the average distribution is about the same. In the territory south of the Ohio River the business is stated to be much larger and the jobbers in that section are growing in importance as measured by the volume of gasoline sold.

The price situation has shown very little change. Any lower prices have been for small lots, a few cars at most, owned by markets who bought them for November shipment and took them out at the close of the month, having the cars shipped to their own order. When they failed to find a purchaser "at the market" they took a little less to avoid demurrage charges. Refinery prices have been very firmly held and not only have refiners been able to obtain their price but they have in a number of cases been slow in shipping orders accepted. The sales manager of one of the largest Mid-Continent organizations was in the city and stated that so far as his plant was concerned, it would be impossible to take orders for immediate shipment as they had no stocks at all, and were running from the stills to the loading racks. He stated others were in the same position. If there are any surplus stocks they are in strong hands. On one day there was some evidence of a little softening in the Mid-Continent market but buying orders were reported from two large companies and the situation immediately recovered.

Firm or Higher Prices

The outlook is considered good for firm and very likely somewhat higher prices. No one is attempting to predict where the advance will stop and even those who thought the peak had been reached at 10 cents for U. S. Motors are now talking of 11-cent gasoline as something very probable. In fact there are some who believe there will be a much greater advance and that when the spring season sets in the price may advance to as high as 14 cents for Motors gasoline. One reason is that the trade here has come around very generally to a belief crude prices will be advanced and, of course, all the products will feel the effect.

One "old-timer" in the refining industry was not doubtful of the advance in crude but did question its wisdom, especially from the viewpoint of the large refiner who had his own production or controlled production in some way. His idea is that an increase in the prices for crude would increase drilling and there was no saying what might result. He argued, with so many refiners now owning cracking plants and so many others adding such equipment, the time might be nearer at hand than some suspected when the quantity of crude required to supply our needs for gasoline would be less than during the past few years. It is quite generally understood that three of the Big Five on the Pacific Coast are adding cracking plants of the kind that can crack fuel oil or practically any kind of petroleum crude or residue. This alone would enable California refiners to greatly increase their output of gasoline with no additional production. He had some figures on the quantity of gas oil being cracked today but none on the volume of heavier oils run to the cracking stills and said it was in the matter of gasoline from fuel oils that information was more important than from gas oils as the quantity of the heavier oil was so much greater than of the gas oils. However, he said the price of crude would probably be advanced simply because some buyers were paying premiums and this would force other purchasing companies to do the like until the market almost automatically advanced itself.

Interest In Contracts

The greater interest in the market manifested by some of the best jobbers as well as many smaller concerns is extending to contracts. There are some who argue there will be comparatively few contracts signed for next year, but this view is not universal. There are quite a number of jobbers who have delayed signing, simply because they did not regard the margin sufficiently liberal. There has been so much talk of the excessive margins granted two and three years ago that jobbers who have never been able to secure such terms have been led to believe they are obtainable if they only hold out. One fair sized jobber said he had come to the city for the purpose of settling this question and had two contracts offered him. One was 4 cents flat below the tank wagon over the season. The other was 3½ cents minimum and 5½ cents maximum. He preferred the flat rate, but wanted one-half cent more margin, although he would have probably been willing to sign at 4¼ cents. There are many who have signed and many on the fence, waiting for another half or quarter cent to be offered, but the majority of those distributors who have had contracts in the past will sign again for at least 75 per cent of their usual requirements. Other contracts are being made, based on a spot market figure. The number of really worth while jobbers entering the season with no agreement regarding at least a substantial portion of their supplies will not be materially less than last year or, if it is, it will not be the fault of the jobbers.

There has been practically no change in the going prices for gasoline in any gravity. The market has been quiet, the movement very fair for the season. Natural gasoline has been very quiet so far as the local demand is to be considered. There has been a good deal of talk regarding export orders, but little actual business could be traced and the talk smacked a little like market propaganda. In one case a local office of a large company was reported to be seeking to buy 64-66 and 58-60 for export, but inquiry at the local office resulted in the statement that all export business was handled from the New York office and they had no information regarding the reported orders.

Kerosene Steady

Kerosene is firmly held and moving fairly well. There is no great rush of business, just a quiet steady demand in replacement orders from all parts of the territory. Prices are maintained by refiners. In this product there has been no change in prices, which are 5⅛ to 5¼ cents to the trade for the 41-43 gravity.

Furnace Oils Better

Furnace oils are doing a little better, but not what is assured they will do as the weather grows colder. Earlier in the week the temperature dropped and some distributors were put to it to answer the calls for oil. Night work was necessary in several plants. The argument is that if a couple of days of only moderately cold weather will start up such a demand what will a real cold spell do? But it might be the consumers had in many instances let their tanks run low because it was the end of the month and by waiting a little they could carry the cost of the fill over until after Christmas. The refinery market is naturally firm. Some season contracts advanced automatically to the 4-cent price December 1 and this is about the present market for a good distillate. Dealers here report a large increase in business and even those with whom this is the first season seem to be able to secure considerable business. There has been some attempt to restore rates to the figure set early in the season. The Standard Oil Co., which has but one grade of furnace oil, is selling at 8½ cents in 400-gallon dumps and additions are made to this price for smaller quantities and for special service. This company agrees to fill all orders the same day as received if the order is placed before 1 P. M., otherwise one-half cent is added. The schedule of charges generally quoted now is 9 cents for 38-40 gravity in 400-gallon dumps; 8½ cents for 36-38 gravity; 8 cents for a 32-36 gravity; 7½ cents for the 28-32 gravity; 7 cents for 24-26 and 6½ cents for 18-20 gravity. The dealers assert all future business will be done at these prices or higher if the cost of the oil necessitates, but they admit a large business has been booked for the season at lower prices. Considering the present refinery prices these selling prices are very reasonable, but most distributors have covered their season requirements at less than present costs, but not all.

Gas Oil Quiet

Gas oil is rather quiet. In fact, there is little new business being placed, but prices are steady at least. The gas companies are drawing freely against contracts and there is a steady movement of the higher grades of gas oil as furnace oil. The industrial inquiry is light, cars here and there. The demand would be quickened by colder weather. Sales of light, zero cold test gas oil over December at 3½ cents at the refinery have been made for resale and this is considered a very good price for the buyer as most refiners are unwilling to make a price over the month at as low a level, according to marketers. The market for desirable grades is held at 3⅝ to 3¾ cents with a little going at above and below this range under exceptional conditions as to grade of oil or the necessities of the buyer.

Fuel Oil Firm

As regards fuel oil refinery prices have been advanced and are firmly held. There have been some rather large offers of refinery fuel oil, but always at the full refinery prices and when asked if they had bought any material amount the dealers have replied they did not know right now where to place the oil and had not bought. It is generally assumed that there is an abundant supply of fuel oil available at the refiners' prices. The latter are holding firm and have been adverse to even quoting over the month, but most are now doing so. They are willing to take the chance that the demand will improve until they will be able to get full or better prices and as in the case of gasoline much depends on the weather. The spot demand is light as the bulk of the large users have supplies from contracts.

The Smackover situation continues practically unchanged. Local dealers are selling quite freely at $1 a barrel and buying at 95 cents over December. In some cases the large consumers have been able to contract for considerable quantities at a little less than $1. One large brick company is paying 99 cents. The number of possible users of Smackover fuel is limited and probably all concerns that can or dare to try using this oil are doing so at the present time. There is a report that the quantity of sulphur in the oil can be reduced to less than 1 per cent by a special process and if this is the case the oil will have a larger distribution and come more actively in competition with refinery fuel oil.

Lubs Strong

Lubricating oils are showing strength and the outlook so far as the domestic demand is concerned is good. The reports of the Department of Commerce show a slight increase in the volume of exports of lubricating oils for October, compared with last year, but for the 10-month period, a slight decline is shown, largely due to the unstable financial position of several foreign currencies, especially that of France. The actual demand for motor lubricants is showing some decrease as the cars are less used, but this is seasonable. The industrial demands is entirely of a routine nature and is in fair volume.

Tank Wagon Situation

There has been no general change in the tank wagon price over the territory of the Standard Oil Co. of Indiana. At several points in the territory where the tank wagon prices have been below normal the situation has been corrected. A determined attempt has been made to get the scale in the Twin Cities back to normal and some progress is reported. The Standard Oil Co. has not increased its rates at Minneapolis, but will do so as soon as a settled condition is developed. There is a great deal of price cutting locally, some of it under cover and the dealers who are making the cuts claim they are simply meeting the prices which result from the operation of the quantity discount plant to the larger users. The Post Office Department opened bids for the supply of gasoline for the first quarter of 1926, the award will be made from Washington. The Shaffer Oil & Refining Co. is the present source of supply. The requirements are 70,000 gallons per month, which the seller receives in its own tankage and deliveries to the truck of the department, which distributes the gasoline among the various post office, garages and stations.

NORTH TEXAS MARKETS REPORT HEALTHY TONE

FORT WORTH, Tex., Dec. 7.—The gasoline market and the fuel oil market are very strong in North Texas territory, lending a healthy tone to the entire refined oil situation. There is an unusually good demand for gasoline, both for export and for domestic use.

Motor Oil sold during the week from 10¼ to 10½ cents with practically all trades being closed at the higher figure. Toward the latter part of the week all offers were being made at 10½ cents and most refiners in Wichita Falls territory were holding out for this price. Export gasoline was in good demand at 12½ to 12¾ cents, though only a fair volume of the product moved out of this territory during the week.

The kerosene market is unchanged. Practically all moved during the week sold at 5¼ to 5½ cents, with the bulk of the trading at the latter figure.

The fuel oil market has had a sensational rise during the past two weeks. The railroads have been unusually heavy buyers just at a time when the market was expected to show additional strength due to the winter season and the increased demand. Railroads purchased in the Wichita Falls territory alone this week about 120 cars of fuel oil. Prevailing prices were around $1.60 per barrel for most of it.

DRILL IN BILLINGS DISTRICT

BILLINGS, Mont., Dec. 4.—Entrance of the Leonard Petroleum Co. into the Big Lake Field, 37 miles northwest of Billings, was announced with the consummation of a deal for 600 acres, purchased from the Harrison Oil & Gas Co., one of the largest holding companies in this field.

The Leonard Petroleum Co. plans to drill three wells near the Hepp discovery well on the Moddrell lease. The first well has been spotted 530 feet south of the Midwest-Moddrell No. 1 producer.

EASTERN MARKETS STILL IMPROVE; RECORD FUEL OIL CONSUMPTION

By N. O. Fanning

NEW YORK, Dec. 5.—The eastern refined oil markets continue to improve. Standard Oil Co. of New York equalized its gasoline tank wagon price to 17 cents throughout its territory, constituting an advance of 1 cent in all but New York and vicinity. This action was looked upon as especially significant throughout the oil trade as indicating the beginning of real improvement in the oil situation.

In this column it has already been reported that "cut-rate" gasoline dealers were finding it difficult to make contracts at the old prices, and due to the action of independent refiners in cutting production it is becoming increasingly hard for them to buy gasoline without paying much higher prices.

It is expected the Standard Oil Co. of New Jersey will advance its tank wagon prices 1 to 2 cents a gallon in the near future. The Standard Oil Co. of New York recently adjusted its prices. One reason for the improvement in the general market situation is that consumption of gasoline has been above expectations during the past three weeks, following a period of bad weather in which its use was temporarily restricted.

The importance of restrictions on production, however, cannot be overemphasized, according to leaders in the trade who say that only so long as the bulk of refiners are cautious the gasoline market will hold strong throughout the winter.

One opinion of the gasoline market which bears considerable weight is as follows:

"That there is plenty of gasoline in the country today based on current consumption there can be no doubt, nor is there any question of the ability of the oil industry to increase production if necessary at short notice. However, the market at present appears to be in strong hands, and there is a disposition on the part of the independent refiner to hold out for higher prices.

"What the big marketers of gasoline must consider, however, is not only the problem of supplying present requirements, but that of taking care of the spring, summer and fall demand of 1926. When it is realized that they have only three or four months in which to get themselves in shape to supply this demand at reasonable prices, the problem looms pretty large.

"If prices remain on rock bottom and production is restricted during the present season, the chances are there would be an unprecedented shortage of gasoline next year, with runaway prices and the damage exceptionally high prices always do to the oil business. Better it is that output be stimulated with the possibility of a slight oversupply than for the opposite to happen.

"The consumption of gasoline, is, of course, one factor that can never be accurately forecast. Weather has a great deal to do with it. Refiners must prepare, however, for a good season or else run the risk of being caught short. They would rather overproduce, no doubt, than be caught unprepared.

"Whatever one may say, the majority of oil refiners would prefer a large business with a small margin of profit than temporarily a large business with large profits."

Kerosene Market Strong

The kerosene market continues strong. Demand is holding up unusually well, with exports heavy.

Fuel Oil Firm

No doubt the strength generally in the oil markets is traceable to the fuel oil situation. Inasmuch as cracking has put fuel oil in competition with crude oil in supplying gasoline, the fact that the fuel oil market is strong in various sections is of the utmost significance.

The decline in fuel oil prices in California not so long ago brought prices down in line with those east of the Rockies, but since then fuel oil prices in the Southwest have been advancing. The Atlantic Seaboard market is firm, and is believed now to be on rock bottom.

An important feature is that the big flood of California fuel oil so far has failed to materialize. The California market had been looked upon as the one remaining barrier to prosperity in the oil business, and although stocks looked big on paper, the course of prices indicates that the market is ready to absorb all the fuel oil it can get at present quotations.

The consumption of fuel oil is increasing by leaps and bounds. This winter is expected to show a record consumption and it is probable that stocks of fuel oil in the United States will be substantially reduced by the end of winter.

In addition to the demand for bunker fuel oil, a great demand for Diesel oil has developed, and the competition between Diesel oil and coal is not the same, inasmuch as Diesel oil is used in internal combustion engines and not under boilers to produce steam. The matter of prices in regard to Diesel oil is not as competitive as bunker oil, and it is believed a price of $3 a barrel, instead of the approximate $2 now quoted would not restrict consumption. The Diesel engine is just beginning to be recognized.

Lubricants Firm

The lubricating oil market is practically without feature, prices remaining firm. Cylinder stocks are in a little better demand.

Paraffin wax is slightly easy, for seasonal reasons. Wox of 125-127 a.m.p. has been shaded one-eighth of a cent, but other melting points show no change during the week.

The petrolatum market is somewhat improved, with the fixing of substantial contracts for amber at 3⅜ cents per pound, an advance of one-eighth of a cent. Other grades are quiet and unchanged in price.

Export Market

The Standard Oil Co. of New Jersey advanced export kerosene one quarter of a cent per gallon during the week. By means of small advances the export price of kerosene is now 1½ cents per gallon above the low mark for the year, the advances all coming since September 1.

Standard white in cases is now quoted for export at 17.65 cents per gallon and water white at 18.65. Bulk kerosene is quoted by independent exporters at 7 cents per gallon for prime white, against a low of 6, an advance of 1 cent. The export market is still somewhat below the domestic market.

During the past week gasoline and kerosene shipments fell off considerably, but the movement of lubricants and wax was heavy. Lubricating oil exports amounted to 2,888,133 gallons, consisting of 1,694,123 gallons in bulk, 1,155,300 gallons in barrels and 38,710 gallons in cases. Bulk shipments were to Europe.

Paraffin wax exports aggregated 2,281,620 pounds of refined and 1,001 bbls. of crude.

Tanker Charters

Tanker fixtures during the week include:

The tanker Massasoit, 2,737 tons net, approximately 60,000 bbls. of gas oil, December-January loading, New York to Sweden, at 20s. per ton.

The following table shows principal exports of petroleum and petroleum products from New York during the week ended December 2, 1925, and the two preceding weeks (all figures in gallons unless otherwise noted):

	Week Ended—		
Gasoline	Dec. 2	Nov. 25	Nov. 18
Bulk	.....	1,175,970	5,197,738
Barrels	25,000	.....	.....
Cases	174,000	2,442,480	373,830
Kerosene—			
Bulk	.....	1,215,206	5,201,923
Cases	861,770	764,980	175,000
Gas oil—			
Bulk	.....	.....	370,509
Fuel oil—			
Bulk	.....	.....	348,764
Cases	.....	15,000	.....
Lubricating oil—			
Bulk	1,694,123	337,843	.....
Barrels	1,155,300	1,247,250	1,301,500
Cases	38,710	124,370	33,700
Paraffin wax—			
Bags (Lbs.)	2,281,620	.....	725,200
Barrels (Bbls.)	1,001	.....	.....
Petroleum Coke—			
Bulk (Lbs.)	.....	2,800,000	.....
Crude oil—			
Barrels	262,550	364,300	149,300

Figures include barrel and case shipments of 500 bbls., 1,000 cases or larger.

Oil Imports Increase

There was a sudden rush of oil to the Atlantic Seaboard from Mexico during the past week. Imports averaged 180,000 bbls. daily, against 36,000 bbls. the preceding week.

Total estimated receipts of crude and refined by water at all Atlantic ports were 517,000 bbls. daily, compared with 310,000 bbls. the preceding week, an increase of 207,000 bbls.

Receipts from the Gulf Coast averaged 319,000 bbls. daily, a gain of 80,000 bbls. over the week before.

Of the imports, which averaged 180,000 bbls. daily, Mexico contributed a daily average of 145,000 bbls. Approximately 290,000 bbls. of oil, a daily average of 41,000, arrived at Charleston from Mexico and Peru. Charleston was second only to New York in the amount of imports during the week.

Receipts from the Pacific Coast at Atlantic ports for the week ended December 2 are estimated at only 18,000 bbls., the smallest in weeks.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports from the Gulf and Pacific Coasts of the United States, and imports for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week Ended—		
	Dec. 2	Nov. 25	Nov. 18
Gulf Coast	319,000	239,000	234,000
Pacific Coast	18,000	35,000	78,000
Imports	180,000	36,000	76,000
Total	517,000	310,000	388,000

Daily Averages By Months				
1925—	Gulf	Pacific	Impts.	Total
November	259,000	36,000	92,000	387,000
October	249,000	36,000	102,000	387,000
September	306,000	66,000	76,000	448,000
August	291,000	54,000	90,000	435,000
July	391,000	63,000	107,000	561,000
June	379,000	66,000	118,000	562,000
May	312,000	51,000	145,000	508,000
April	353,000	78,000	101,000	532,000
March	272,000	82,000	135,000	490,000
February	262,000	51,000	147,000	460,000
January	311,000	77,000	133,000	521,000
1924—				
December	306,000	83,000	85,000	474,000

The foregoing estimates are based upon the carrying capacity of incoming oil-laden tankers.

PENNSYLVANIA MARKET REPORTED IMPROVING

OIL CITY, Pa., Dec. 5.—There has been an improvement in the Pennsylvania refined price structure during the week and the tone is also better. Refiners now show a tendency to refrain from price cutting and few sales are made at lower than the quoted prices.

Especially pronounced during the week was the strength of kerosene and neutral oils. The price was better and the demand improved. Stocks of these products held in this district are said to be low.

All the rest of the list with the exception of cylinder stocks was improved. Cylinder stocks seem to be merely holding their own.

Gasoline showed a price improvement during the week despite the fact that consumption has slumped off some due to the weather.

CADDO CENTRAL SALE HAS BEEN POSTPONED

SHREVEPORT, La., Dec. 5.—A prior order of the United States District Court here for sale of properties of Caddo Oil & Refining Co. and the Caddo Central Oil & Refining Corp., in receivership, covered by mortgages held by the Bank of North America & Trust Co. and the Guaranty Trust Co., has been canceled and the date of sale postponed to January 8, 1926.

The later order recites that there is due the Bank of North America & Trust Co. $1,722,049 and to the Guaranty Trust Co. of New York $4,990,197 on loans protected by first mortgage, and Henry A. McCarthy and Nicholas Callan, special masters, are directed to sell the properties covered by the mortgages unless the two companies meet the obligations.

SUPPLY AND DEMAND IN PAST FOUR MONTHS

(Continued from Page 36)

same figure as in September (close to 70,000,000 bbls.), while demand increased from 68,733,000 bbls. to 71,462,000 bbls. with the result that total stocks were drawn upon for 1,874,000 bbls.

Analyzing this change in stocks we find that under the caption "Source of Difference," pipe line and tank farm stocks were increased 2,492,000 bbls., while crude in storage at refineries was drawn upon for 2,627,000 bbls. Foreign crude, not at refineries, was drawn upon for 31,000 bbls. and the stock of refined products at refineries was drawn upon for 1,708,000 bbls.

During August, September and October we made substantial increases in pipe line and tank farm stocks—and drew on crude stocks at refineries.

During September and October we reduced our refined and partly refined products in storage by about the same amount.

East of California, pipe line and tank farm stocks decreased almost 4,000,000 bbls. from July to October. Stocks of California light oil dropped slightly, while heavy oil increased over 11,000,000 bbls. Crude at refineries east of California, decreased over 6,000,000 bbls., while foreign crude, not at refineries, held about constant, and under a million barrels.

At the end of July the total crude in storage (including California fuel oil in storage in California) was 421,857,000 bbls. At the end of August it was 419,963,000 bbls.—at the end of September, 422,645,000—and at the end of October, 422,479,000.

Crude oil in storage has varied, therefore, during the above period, less than ½ of 1 per cent.

July 31 the refined and partly refined products in storage totaled 126,472,000 bbls.—August 31 they stood at 126,586,000 bbls.—September 30 at 124,782,000 bbls.—and October 31 at 123,074,000 bbls.

Varied But 3 Per Cent

It thus appears that, during the above period, the refined and partly refined products in storage have varied less than 3 per cent.

Of these products, the stock of gasoline dropped from 38,352,000 bbls. at the end of July to 36,410,000 bbls. at the end of October—a decrease of about 5 per cent.

Of the "other products," the stock of kerosene has decreased about 2,500,000 bbls.—fuel oil has increased about 1,000,000 bbls., while the stock of lubricating oil has held about constant.

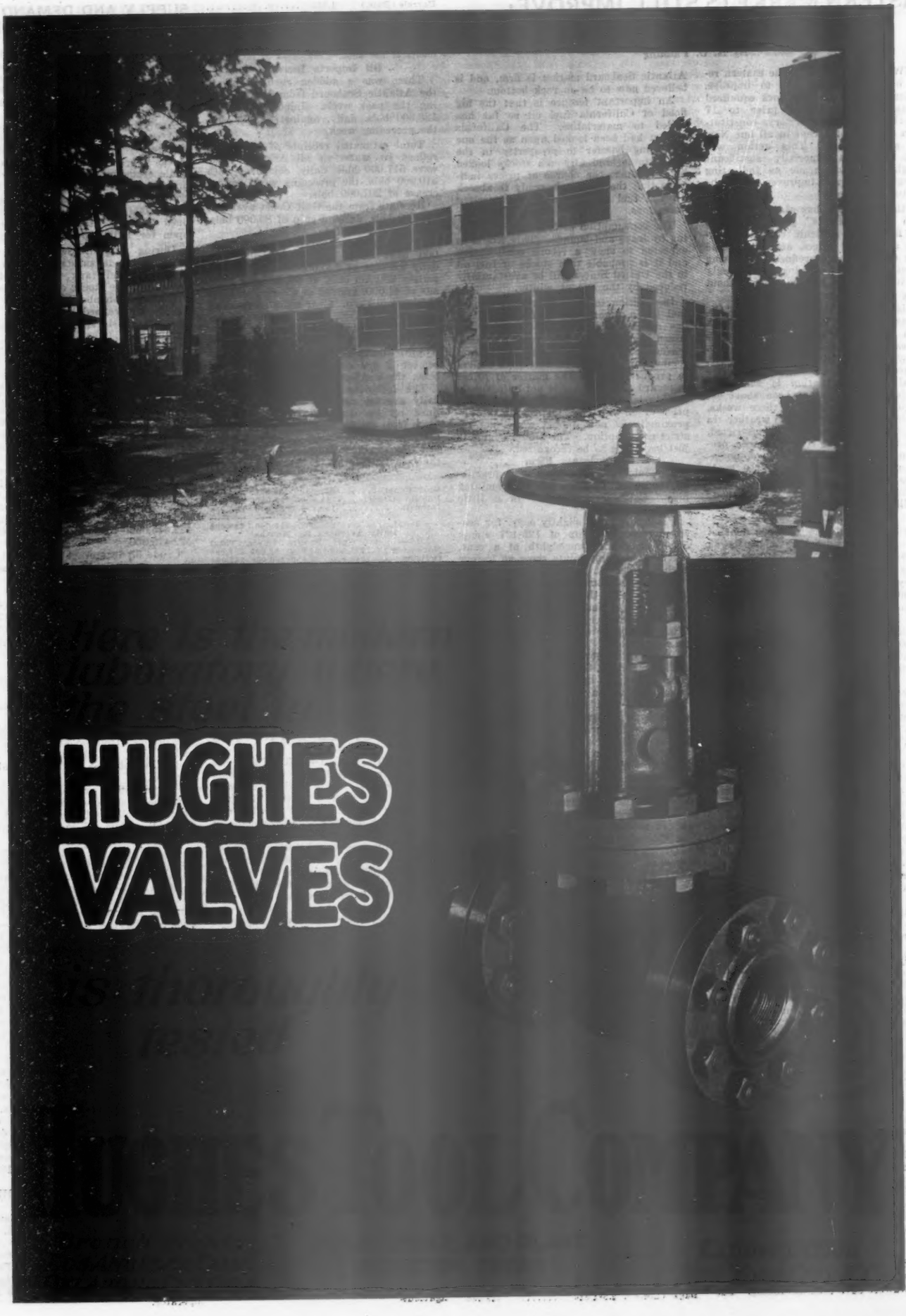
At the end of last February total stocks of crude oil and finished and partly finished products stood at 521,417,000 bbls.—and October 31, after we had passed the peak of gasoline consumption for 1925, they stood at 545,553,000 bbls.—an increase of about 4½ per cent.

And if, during November and December—and the early months of 1926—the total stocks above ground can be got back to about where they stood at the end of February, 1925 (521,000,000 bbls)—and kept well under 550,000,000 bbls. during the summer of 1926, the industry can entertain hopes of a reasonably prosperous year in 1926—if no new major oil fields are uncovered.

The problem is not so much to determine about how much the market requirements for the different products will be in 1926. That can be determined today within reasonably close limits. The hard problem will be to "hold down" production and refining—and let demand run comfortably ahead of supply for about six months in 1926—in comparison with two months thus far in 1925.

ALEXANDER GILLESPIE DEAD

CHATHAM, Ont., Dec. 4.—Alexander Gillespie, a resident of Petrolia, Ont., for half a century, died recently in his 79th year. Born in Cornwall, November 18, 1846, Mr. Gillespie came to Petrolia in the early boom days and engaged in drilling oil wells and later became an oil operator.


HUGHES
VALVES

Brief Items for Plant Operators

Fuel Oil and Diesel Engines Utilized For Power In Flour Mills

The use of fuel oil and Diesel engines has proved successful in generating power for flour mills, according to Charles Dalrymple, chief engineer of the Red Star Milling Co., in a paper presented during Oil Engine Week at Kansas City and reprinted in "Power."

Power for the Red Star plant for two years has been generated by two 750-hp. engines directly connected with 625-kva. generators. All densities and grades of fuel oil, the gravity ranging from 28 to as low as 18 degrees, have been used in the engines successfully and economically, Mr. Dalrymple said.

In explaining the use of fuel oil in the mill's engines, Mr. Dalrymple pointed out:

"Even in warm weather we often find it necessary to apply heat to get the oil thin enough to pump. Specifications for fuel oil were drawn up several times, but the laboratory tests of different cars vary so widely that we have come to the conclusion that anything that looks like oil and can be pumped when heated, can be classed as Diesel fuel.

"During the first few months of operating this plant we found that while using what appeared to be an excellent fuel oil particularly free from any sediment or foreign matter, the steel valves in the fuel pump would accumulate a deposit that had a tendency to lift the valves from their seats and cut down the capacity of the pump. A sample of the deposit was sent to the laboratories for examination and was reported as fine salt crystal. After this a sample was taken from each car of fuel oil and tested for sediment, water, viscosity and ash. A determination was also made as to the percentage of salts in the ash. It was found that if the percentage of salt was below a certain point, no deposits formed on the pump valves, even though the oil contained much more sediment and foreign matter than the oil that gave the trouble. Salt in solution with water does not seem to give trouble of this kind.

Laboratory Test of Oil

"Laboratory tests sometimes reveal the presence of water in suspension in the fuel, which would give trouble if no steps were taken to settle the water out. Some samples show a large percentage of carbon residue, which we are told is due to the modern cracking process used by the refineries. No difficulty was experienced in burning this oil except that the strainers needed cleaning oftener and the fuel spray nozzles required attention at shorter intervals.

"The decision to install this plant was made with the intention to secure dependable power of constant voltage, frequency and free from interruptions, rather than with the hope of making any startling savings in the cost of power, as the rates in effect in that locality were not unfavorable. The complete records for the year 1924 show a total net output of 4,354,295 kilowatt hours with the consumption of 402,917 gallons of fuel oil. This is at the rate of approximately 11 kilowatt hours per gallon. All other items of operating cost, including wages, repairs, lubrication and supplies, were $13,642.26, giving a total operating cost of 6.16 mills per kilowatt hour as the average for the year. This leaves a margin below the cost of purchased power for interest, depreciation and taxes more than sufficient to justify the investment."

TESTS PROVE ETHYL GASOLINE SATISFACTORY FOR AEROPLANES

Probably the most significant statement in connection with ethyl gasoline since the investigation by Surgeon-General Cummings got in progress was made at the annual meeting of the American Society of Mechanical Engineers held in New York November 30 to December 4, by Lieutenant Commander E. E. Wilson, head of the Engine Section, Bureau of Aeronautics, Navy Department, to the effect that, its supplies of a high test gasoline from Sumatra failing, Great Britain has been forced to experiment with treated gasoline to eliminate knock in high compression air operations, and that Great Britain and other countries are negotiating for the purchase of ethyl fluid, or tetra-ethyl lead. Commander Wilson stated that United States Navy aviators are successfully using tetra-ethyl lead, and that he has reported to the surgeon-general that endurance flights with gasoline doped with ethyl fluid by the men themselves have been made without difficulty. He asserted the conviction that "no danger can result from ethyl gasoline in aircraft."

Commander Wilson submitted a formal paper on "Power Plants for United States Navy Aircraft" before the Oil and Gas Power Section of the meeting, in which he only touched briefly on ethyl fluid in connection with certain engine developments. He was awarded the first prize for the best contribution to the National Oil and Gas Symposium for 1925 at the opening meeting of the society. Commander Wilson's fuller statement on ethyl gasoline was released apart from his formal paper and is the statement he has made to the surgeon-general. It follows in full:

"The question of tetra-ethyl lead and its use in gasoline to form ethyl gasoline as a fuel for the engine in aeronautics is one that is very important to the Navy Department and one that will be increasingly important as the quality of motor gasoline falls down. In the aircraft engine, of course, the question of power is everything and the question of fuel economy is everything, because it involves the weight of the structure.

"During the past two years we have been very much interested in the development of fuels of high power and have had tests on tetra-ethyl lead and have been at work in the development of special fuels. Among these special fuels we have tried two which were to be developed from straight gasoline. These have been used in the service and the reaction of the personnel to these straight gasoline fuels was very unfavorable. The odor was very bad. The toxic qualities were supposed to be very bad and the net result was that we had to withdraw these fuels from the service.

Complete Success

"On the other hand, we have used large quantities of ethyl fluid (tetra-ethyl lead) with complete success and so far we have had no reports of any difficulties. Last year we ran some endurance flights during which we used 750 gallons of ethyl gasoline per flight. The gasoline was doped with ethyl fluid

(Continued on Page 135)

AMONG THE TECHNICAL MEN

R. E. Young, general superintendent of refining operations of the International-Ardmore Division of the Pure Oil Co., has had practical technical experience in all phases of the oil industry.

R. E. Young

Mr. Young began work in the oil business as a roustabout on a pipe line crew for the Ohio Oil Co. back in Illinois, later entering the production end and finally the refining industry. His experiences carried him from Illinois to the Mid-Continent, thence to California, back to Oklahoma, Louisiana, Indiana, Ohio and again to Oklahoma.

Mr. Young has been connected with the Pure Oil Co., or companies which have been taken over by the Pure Oil Co., since 1910, when he started work for the Muskogee Refining Co. In turn he became connected with the Chelsea Refining Co., the Ardmore Refining Co. and the Cushing Refining Co., all of which companies later were taken over by the International Refining Co., the Ohio Cities Co. and then the Pure Oil Co. He built the Cushing refinery in 1915 and operated it until 1919, when he was transferred to Columbus, Ohio, in charge of construction work of the International Refining Co. In 1920 he went back to Oklahoma as general superintendent of refining operations, which position he has continued to hold through successive ownership of the Muskogee, Ardmore and Cushing refineries by the International Refining Co., the Ohio Cities Oil Co. and the Pure Oil Co.

Previous to the refining connections, Mr. Young had worked for the Ohio Oil Co., the Gulf Pipeline Co., the Gypsy Oil Co., the Standard Oil Co. of California, and for a time was a transportation contractor in Louisiana.

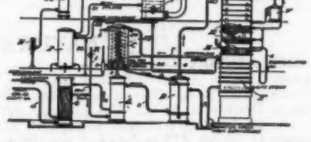
REFINING CONFERENCE OF SINCLAIR OFFICIALS

Improvements and operating plans for the coming year were discussed at the annual meeting of the superintendents and engineers of the Sinclair Refining Co. held last week in Houston. George H. Taber, Jr., of New York, vice president of the company, in charge of refining operations, presided at the several conferences.

In addition to Mr. Taber those attending the conference were: R. C. Sawyer, general manager of refineries, New York; G. Bebbington, superintendent at Kansas City; P. E. Gow, superintendent at Muskogee; W. R. Argyle, superintendent at Marcus Hook; B. J. Healy, superintendent at Coffeyville; O. W. Walchli, superintendent at Wellsville, N. Y.; R. J. Black, superintendent at East Chicago; T. S. Williams, superintendent at Cushing; J. W. Duckett, superintendent at Houston; E. C. Herthel, head of development at East Chicago; E. B. Phillips, chief chemist, Chicago; O. F. Campbell, combustion engineer of East Chicago; J. S. Hess, chief engineer, New York, and Judge W. E. Ziegler, head of liability department, Kansas City.

Recent Patents

1,561,899. PROCESS FOR EXTRACTING BENZOLS FROM HEAVY OILS. Emile Augustin Barbet, Paris, France. Filed March 21, 1921. Serial No. 454,214. 1 Claim. (Cl. 196—8.) (Granted under the provisions of the act of March 3, 1921, 41 Stat. L., 1313.)



A process which comprises progressively heating a mixture including a heavy nonvolatile oil containing absorbed materials normally present as vapors in coke oven gas, first by the heat of the outgoing stripped oil and by the vapors carrying naphthalene coming from the high heating of such oil as set forth below, thereafter running the somewhat preheated oil through a column still including a rectifying column and first heating the same by indirect steam heat to about 160° C., while drawing off the evolved vapors of the lower part of the restifying column through which such vapors rise, further heating the unvolatilized oils by blowing thereinto superheated steam capable of raising the temperature of said oils to vaporize the naphthalene, and drawing off the mixed vapors containing naphthalene and superheated steam and cooling such vapors by indirect cooling with the lukewarm incoming oils, such vapors being kept separate from those passed through the rectifying column.

1,561,758. APPARATUS FOR DISTILLING OIL. George W. Wallace, East St. Louis, Ill. Filed May 20, 1922. Serial No. 562,500. 6 Claims. Cl. 196—122.)

4. A still for cracking oil, comprising a plurality of banks of tubes adapted to contain oil that is to be cracked, transversely-disposed headers at the ends of said tubes communicating with the tubes of the respective banks, a passage-

(Continued on Page 135)

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Dec. 8		Dec. 1		Nov. 24	
OKLAHOMA (Group 3)—						
50-52 450 end point	.09	.09½	.09	.09¼	.08½	.09
56-58 450 end point	.09½	.09¾	.09½	.09¾	.09½	.09¾
58-60 437 end point (U. S. Motor)	.10¼		.10¼	.10½	.10	
60-62 400 end point	.11¾	.12	.11¾	.12	.11¼	.11¾
64-66 375 end point	.12⅝	.12⅞	.12½	.12¾	.12½	.12¾
68-70 350 end point	.13½	.13¾	.13½	.13¾	.13½	.13¾
KANSAS—						
58-60 437 end point (U. S. Motor)	.10¼	.10½	.10½	.10¾	.10¼	
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.08¾	.09	.08¾	.09	.08½	
50-52 440 end point (Naphtha)	.09	.09¼	.09	.09¼	.08½	.08¾
56-58 450 end point	.09½	.09¾	.09¼	.09¾	.09½	.09¾
58-60 437 end point (U. S. Motor)	.10¼		.10¼		.10	
60-62 400 end point	.11½	.11¾	.11⅝	.11¾	.11½	.11¾
64-66 390 end point	.12¼	.12½	.12¼	.12½	.12¼	.12½
64-66 375 end point	.12¾	.13	.12⅝	.12¾	.12½	.12¾
68-70 360 end point	.13½		.13½		.13¼	.13½
NORTH LOUISIANA—						
56-58 450 end point	.10	.10¼	.10	.10¼	.10	.10¼
58-60 437 end point (U. S. Motor)	.10½	.10¾	.10½	.10¾	.10¼	.10½
60-62 400 end point	.12	.12¼	.12		.11¾	.12
64-66 390 end point	.12¾	.13	.12½	.12¾	.12½	.12¾
64-66 375 end point	.13	.13½	.12¾	.13	.12¾	.13
ARKANSAS—						
58-60 450 end point	.10¼	.10½	.10¼	.10½	.10	.10¼
58-60 437 end point (U. S. Motor)	.10½	.10¾	.10½	.10¾	.10¼	.10½
64-66 375 end point	.12¾		.12¾		.12¾	.13
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (U. S. Motor)	.13¼	.13½	.13¼	.13½	.13	.13¼
PENNSYLVANIA—						
52 Naphtha	.11¼	.11½	.11	.11¼	.11	.11¼
54 Naphtha	.11½	.12	.11¼	.11½	.11¼	.11½
56 Naphtha	.12	.12¼	.11½	.11¾	.11½	.11¾
58 Naphtha	.12½	.12¾	.12	.12¼	.12	.12¼
60 Gasoline	.13½	.13¾	.12¾	.13	.12¾	.13
62 Gasoline	.14	.14½	.13½	.14	.13½	.14
64 Gasoline	.15¼	.15½	.15	.15¼	.15	.15¼
66 Gasoline	.16¼	.16½	.16	.16¼	.16¼	.16½
68-70 Gasoline	.20	.20½	.19½	.20	.19½	.20
CALIFORNIA—						
54-58 437 end point (U. S. Motor) domestic	.09	.09½	.09	.09½	.09	.09½
CHICAGO DIST. (Based on Group 3)—						
50-52 450 end point (Naphtha)	.09¼	.09½	.09¼	.09½	.08¾	.09
56-58 450 end point	.09½	.09¾	.09½	.09¾	.09½	.09¾
58-60 437 end point (U. S. Motor)	.10¼	.10½	.10¼		.10	.10¼
60-62 400 end point	.11¾	.12	.11¾	.12	.11½	.11¾
64-66 375 end point	.12⅝	.12¾	.12¾	.13	.12½	.12¾
68-70 360 end point	.13½	.13¾	.13¾	.14	.13½	.13¾

*Colorado points.

NATURAL GASOLINE

	Dec. 8		Dec. 1		Nov. 24	
OKLAHOMA (Group 3)—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.11¼		.11¼		.11¼	.11½
Grade A, 72-79.9, 375 end point, rec. 90%	.11¼		.11¼		.11¼	.11½
Grade Double B, 84-92, 375 e.p., rec. 85%	.10¼	.10½	.10¼	.10½	.10¼	.10½
Grade B, 76-83.9, 375 end point, rec. 85%	.10¼	.10½	.10¼	.10½	.10¼	.10½
Grade C, 80-90, 375 end point, rec. 78%	.09½		.09¼		.09	.09¼
NORTH TEXAS—						
Grade Double A, 80-87.3, 375 e.p., rec. 90%	.11¼		.11¼	.11½	.11¼	.11½
Grade A, 72-79.9, 375 end point, rec. 90%	.11¼		.11¼	.11½	.11¼	.11½
Grade Double B, 84-92, 375 e.p., rec. 85%	.10¼	.10½	.10¼	.10½	.10¼	.10½
Grade B, 76-83.9, 375 end point, rec. 85%	.10¼	.10½	.10¼	.10½	.10¼	.10½
Grade C, 80-90, 375 end point, rec. 78%	.09½		.09¼	.09½	.09	.09¼
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 end point, rec. 90%	.11¾	.12	.11½	.12	.11¼	.11½
Grade B, 76-83.9, 375 end point, rec. 85%	.11¼	.11½	.11¼	.11½	.10¾	.11
Grade C, 80-90, 375 end point, rec. 78%	.10¼	.10½	.10	.10¼	.10	.10¼
CALIFORNIA—						
78-85 absorption, 360-390 end point	.13	.13½	.13	.13½	.13	.13½
78-84 compression, 350 end point	.13	.13½	.13	.13½	.13	.13½
CHICAGO DIST. (Based on Group 3)—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.11¼	.11½	.11¼	.11½	.11¼	.11½
Grade A, 72-79.9, 375 end point, rec. 90%	.11¼	.11½	.11¼	.11½	.11¼	.11½
Grade Double B, 84-92, 375 e.p., rec. 85%	.10¼	.10½	.10	.10¼	.10¼	.10½
Grade B, 76-83.9, 375 end point, rec. 85%	.10¼	.10½	.10	.10¼	.10¼	.10½
Grade C, 80-90, 375 end point, rec. 78%	.09	.09¼	.09	.09¼	.09¼	.09½

MOTOR NATURAL GASOLINE (BLENDS)

	Dec. 8		Dec. 1		Nov. 24	
OKLAHOMA (Group 3)—						
60-62 450 end point	.09¾	.10	.09¾	.10	.09½	.09¾
64-66 437 end point	.10¾	.11	.10¾	.11	.10¾	.11
NORTH TEXAS—						
58-60 450 end point	.09½	.09¾	.09½	.09¾	.09½	.09¾
PENNSYLVANIA—						
*60-62	.13½	.13¾	.13½	.13¾	.13½	.13¾
*64-66	.13¾	.14	.13¾	.14	.13¾	.14
*66-68	.13¾	.14	.13¾	.14	.13¾	.14
*68-70	.14	.14½	.14	.14½	.14	.14½
CHICAGO DIST. (Based on Group 3)—						
60-62 450 end point	.09¾	.10	.09¾	.10	.09½	.09¾
64-66 437 end point	.10¾	.11	.10¾	.11	.10½	.10¾

*At Sistersville, W. Va.

BURNING OILS

	Dec. 8		Dec. 1		Nov. 24	
KANSAS—						
41-43 water white Kerosene	.05¼	.05½	.05¼	.05½	.05¼	.05½
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.05	.05¼	.05	.05⅛	.05	.05¼
42-44 water white Kerosene	.05½		.05½		.05½	
40-41 prime white Kerosene	.04⅞	.05	.04⅞	.05	.04⅞	.05
NORTH LOUISIANA—						
41-43 prime white Kerosene	.05½	.05¾	.05½	.05¾	.05¼	.05½
42-44 water white Kerosene	.05¾	.06	.05¾	.06	.05½	.05¾
ROCKY MOUNTAIN STATES—						
*40-44 water white Kerosene	.08	.08⅛	.08	.08⅛	.08	.08¼
NORTH TEXAS—						
41-43 water white Kerosene	.05⅞	.05½	.05⅛	.05¼	.05	.05⅛
40-42 prime white Kerosene	.05	.05⅛	.04⅞	.05	.04¾	.05
41-43 prime white Kerosene	.05¼	.05½	.04⅞	.05	.04¾	.05
42-44 water white Kerosene	.05½		.05½		.05½	
ARKANSAS—						
41-43 water white Kerosene	.05¾	.05⅞	.05¾	.05⅞	.05¼	.05¾
42-44 water white Kerosene	.06		.06		.05¾	
PENNSYLVANIA—						
43 Kerosene prime white	.07½	.07½	.07	.07¼	.07	.07¼
45 Kerosene water white	.07½	.07¾	.07¼	.07½	.07¼	.07½
46 Kerosene water white	.08	.08½	.07½	.07¾	.07½	.07¾
47 Kerosene water white	.08¾	.09	.08	.08¾	.08	.08¾
34 Neutral	.07¼	.07½	.07¼	.07½	.07¼	.07½
34 Sundebloom Neutral	.08	.09	.08	.09	.08	.09
36 Miners' Neutral	.06¾	.07	.06¾	.07	.06¾	.07
300 Mineral Seal	.07¾	.08	.07¾	.08	.07½	.07¾
CALIFORNIA—						
40-42 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08
Engine distillate, 43-45, 445 end point	.06½	.07	.06½	.07	.06½	.07
Engine distillate, 42-44, 450 end point	.06¼	.06½	.06¼	.06½	.06¼	.06½
CHICAGO DIST. (Based on Group 3)—						
41-43 water white Kerosene	.05⅛	.05¼	.05¼	.05⅜	.05	.05⅛
42-44 water white Kerosene	.05½	.05⅝	.05½	.05⅝	.05⅝	.05⅝

*Colorado points.

FUEL OILS

	Dec. 8		Dec. 1		Nov. 24	
KANSAS—						
24-26 Fuel Oil	1.40	1.50	1.30	1.35	1.30	1.35
32-36 Gas Oil	.03¾	.03¾	.03⅝	.03¾	.03⅝	.03¾
38-40 Distillate	.04⅛	.04¼	.04⅛	.04¼	.04⅛	.04¼
OKLAHOMA (Group 3)—						
Below 22 Fuel Oil (sellers' cars)	1.22½	1.25	1.20	1.22½	1.17½	1.20
22-26 Fuel Oil (sellers' cars)	1.25		1.22½	1.25	1.20	1.22½
24-26 Fuel Oil (buyers' cars)	1.27½	1.30	1.25	1.30	1.25	
24-26 Fuel Oil (sellers' cars)	1.27½	1.30	1.25	1.30	1.25	
28-30 Fuel Oil (sellers' cars)	1.35	1.40	1.35		1.30	1.35
32-36 Gas Oil (dark)	.03½	.03⅝	.03½	.03⅝	.03½	.03⅝
32-36 Gas Oil (light)	.03⅝	.03¾	.03⅝	.03¾	.03⅝	.03¾
36-38 Distillate	.03⅞	.04	.03¾	.04	.03¾	.04
38-40 Straw Distillate	.04	.04¼	.04	.04¼	.04	.04¼
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	1.50	1.60	1.35	1.45	1.30	1.32½
26-30 Fuel Oil	1.60	1.65	1.45		1.35	
32-36 Gas Oil (dark)	.03⅞	.04	.03½	.03⅝	.03½	.03⅝
32-36 Gas Oil (light)	.04	.04⅛	.03½	.03⅝	.03½	.03⅝
38-40 Straw Distillate	.04⅛		.03⅞	.04	.03¾	.03⅞
NORTH LOUISIANA—						
18-20 Fuel Oil	1.05		1.05	1.10	1.00	1.05
32-36 Gas Oil	.03¾		.03¾		.03¾	
ARKANSAS—						
38-40 Distillate	.04	.04¼	.04	.04½	.04¼	.04⅝
32-36 Gas Oil	.03⅝	.03¾	.03⅝	.03¾	.03¾	.04
22-26 Refinery Fuel Oil	1.25		1.25		1.20	
GULF COAST (South Texas)—						
Gas Oil	.04½	.04¾	.04½	.04¾	.04½	.04¾
Fuel Oil	1.50	1.55	1.55	1.60	1.55	1.60
PENNSYLVANIA—						
30-34 Fuel Oil	.05½	.05¾	.05½	.05¾	.05½	.05¾
36-40 Fuel Oil	.06	.06¼	.06	.06¼	.06	.06¼
CALIFORNIA—						
33-36 Distillate	.04¾	.05	.04¾	.05	.04¾	.05
27-35 Distillate	.04	.04½	.04	.04½	.04	.04½
15-20 Fuel Oil (at tidewater)	1.00	1 04	1.00	1.04	1.00	1.04
27 plus Diesel Oil	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DIST. (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars, Group 3)	1.30	1.35	1.30	1.35	1.25	1.27½
18-22 (El Dorado)	1.25	1.30	1.25	1.30	1.20	1.25
18-20 (Smackover)	1.00	1 02½	1.00	1.05	1.05	1.07½
32-36 Gas Oil	.03⅝	.03¾	.03¾	.03¾	.03½	.03¾
36-38 Distillate	.03⅞	.04	.03⅝	.03⅞	.03⅝	.03⅞
38-40 Straw Distillate	.04	.04¼	.04	.04¼	.04	.04⅛

LUBRICATING OILS AND WAX

	Dec. 8		Dec. 1		Nov. 24	
OKLAHOMA (Group 3)—						
70-80 vis., 2½ color, 20-25 cold test	.05	.05¼	.05	.05¼	.05	.05¼
100 vis., 3 color, 20-25 cold test	.04¾	.05	.04¾	.05	.04¾	.05
100 vis., 2 color, 20-25 cold test	.05	.05½	.05	.05½	.05	.05½
150 vis., 3 color, 20-25 cold test	.08½	.09	.08½	.09	.08½	.09
150 vis., 4 color, 20-25 cold test	.08¼	.08¾	.08¼	.08¾	.08¼	.08¾
180 vis., 4 color, 23-28 cold test	.09	.09½	.09	.09½	.09	.09½
180 vis., 3 color, 23-28 cold test	.09¼	.09¾	.09¼	.09¾	.09¼	.09¾
200 vis., 3 color, 23-28 cold test	.10¼	.10¾	.10¼	.10¾	.10¼	.10¾
200 vis., 4 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
220 vis., 3 color, 25-30 cold test	.13½	.14	.13½	.14	.13½	.14
220 vis., 4 color, 25-30 cold test	.13	.13½	.13	.13½	.13	.13½
240 vis., 3 color, 25-30 cold test	.13½	.14	.13½	.14	.13½	.14
240 vis., 4 color, 25-30 cold test	.13	.13½	.13	.13½	.13	.13½
280 vis., 3 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 4 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
Red Neutrals:						
180 vis., 5 color, 23-28 cold test	.08¾	.09¼	.08¾	.09¼	.08¾	.09¼
180 vis., 6 color, 23-28 cold test	.09¼	.10	.09¼	.10	.09½	.10
200 vis., 5 color, 23-28 cold test	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
200 vis., 6 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
220 vis., 5 color, 25-30 cold test	.13	.13½	.13	.13½	.13	.13½
220 vis., 6 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
240 vis., 5 color, 25-30 cold test	.12½	.13	.12½	.13	.12½	.13
240 vis., 6 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
280 vis., 5 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

Cylinder Stocks:						
180-200 vis., S. R. green, 40-45 cold test	.08	.08½	.08	.08½	.08	.08½
190-200 vis., S. R. green, 40-45 cold test	.07	.07½	.07	.07½	.07	.07½
170-190 dark green, 40-45 cold test	.05½	.06	.05½	.06	.05½	.06
600, steam refined	.06	.08	.06	.08	.08	
190-200 vis. @ 210 "D" Bright Stock	.33	.35	.33	.35	.33	.35
200-210 vis. @ 210 "E" Bright Stock	.30		.30		.30	
150 vis. @ 210 "E" Bright Stock	.27		.27		.27	
150 vis. @ 210 "D" Bright Stock	.28		.28		.28	.31
Waxes:						
124-126 White Crude Scale Wax	.05½		.05½		.05½	
PENNSYLVANIA—						
150, 3 color	.17¼		.17¼		.17¼	
180, 3 color	.22½		.21½		.21½	
200, 3 color	.24½		.24¼		.23½	
220, 3 color	.27		.27		.25	
600, steam refined	.17		.17		.17	
635, steam refined	.22		.22		.22	
650, steam refined	.24		.24		.24	
600, Pennsylvania flash	.27		.27		.27	
630, Pennsylvania flash	.35		.35		.35	
*550, E filtered	.19½		.19½		.19½	
600, E filtered	.20½		.20½		.20½	
*600, E filtered	.21		.21		.21	
600, D filtered	.26		.26		.26	
550, E filtered	.19		.19		.19	
550, D filtered	.22½		.22½		.22½	
Pennsylvania Bright Stock	.39½		.39½		.39	
122-124 White Crude Scale Wax	.05⅞	.06	.05⅞	.06	.05⅞	.06
†124-126 White Crude Scale Wax	.06	.06¼	.06	.06¼	.06	.06¼

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.06	.07	.06	.07
No. 2 color, 100 vis., pale oil	.07	.08	.07	.08	.07	.08
No. 2½ color, 150 vis., pale oil	.09½	.10	.09½	.10	.09½	.10
No. 3 color, 200 vis., pale oil	.12	.12½	.12	.12½	.12	.12½
No. 3½ color, 300 vis., pale oil	.15½	.16	.15½	.16	.15½	.16
No. 3¾ color, 500 vis., pale oil	.18½	.19	.18½	.19	.18½	.19
No. 4 color, 750 vis., pale oil	.20	.20½	.20	.20½	.20	.20½
No. 1½ plus color, 150 vis., pale filtered	.21½		.21½		.21½	
No. 2 plus color, 200 vis., pale filtered	.23		.23		.23	
No. 2 color, 300 vis., pale filtered	.27		.27		.27	
No. 2½ color, 500 vis., pale filtered	.31		.31		.31	
No. 2½ color, 750 vis., pale filtered	.41		.41		.41	
No. 5 to 6 color, 200 vis., red oil	.10	.10½	.10½	.11	.10½	.11
No. 5 to 6 color, 300 vis., red oil	.12	.12½	.12½	.13	.12½	.13
No. 5 to 6 color, 500 vis., red oil	.13½	.14	.14½	.15	.14½	.15
No. 5 to 6 color, 750 vis., red oil	.18	.18½	.18	.18½	.18	.18½
CALIFORNIA—						
130 pale, 2½-3 color	.12	.12½	.12	.12½	.12	.12½
200 vis., 2½-3 color	.15½	.16	.15½	.16	.15½	.16
300 vis., 3 -3½ color	.17	.17½	.17	.17½	.17	.17½
350 vis., 3½-4 color	.18½	.19	.18½	.19	.18½	.19
400 vis., 3½-4 color	.20	.20½	.20	.20½	.20	.20½
Red Neutrals:						
200 vis., 4½-5 color	.14	.14½	.14	.14½	.14	.14½
300 vis., 5 -6 color	.15	.15½	.15	.15½	.15	.15½
400 vis., 5 -6 color	.17	.17½	.17	.17½	.17	.17½
500 vis., 4½-5 color	.20	.21	.20	.21	.20	.21
500 vis., 6 -6½ color	.18	.19	.18	.19	.18	.19
600 vis., 6½ plus color	.19	.19½	.19	.19½	.19	.19½

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK DOMESTIC MARKET

Bayonne Refinery Prices:	Dec. 8	Dec. 1	Nov. 24
U. S. Motor Gasoline, 58-60, 437	.12½	.12½	.12½
Export Gasoline, 64-66 Be.	15½	.15½	.15½
*Bunker Oil, 14-16 Be.	1.65	1.65	1.65
*Diesel Oil, New York City	2.10	2.10	2.10
Furnace Oil, New York City	.10	.10	.10
Gas Oil, 32-36 Be.	.06¼	.06¼	.06¼
41-43 Kerosene prime white	.07	.06¾	.06½

*Lighterage, 6.5c a barrel extra.

NEW YORK EXPORT PRICES

	Dec. 8	Dec. 1	Nov. 24
Motor Gasoline:			
58-60 Be. gravity, in cases	.27.15	.27.15	.27.15
Standard white Kerosene, in cases	.17.90	.17.40	.17.40
Water white Kerosene, in cases	.18.90	.18.40	.18.40
†Lubricating Oils (in bulk):			
Cylinder Stock, extra filtered, 600 bbls.	.34	.34	.34
Cylinder Stock, light filtered, 600 bbls.	.29	.29	.29
No. 1 White Neutral, .878 spec. grav.	.36	.36	.36
No. 5 Bright Stock, .897 spec. grav.	.40½	.40½	.40½
Special "A" red oil, .897 spec. grav., 170 vis.	.11½	.11½	.11½
No. 2 red oil, .903 spec. grav., 212 vis.	.12	.12	.12
No. 1 red oil, .905 spec. grav., 265 vis.	.13½	.13½	.13½
Polar red oil, .903 spec. grav., 295 vis.	.14	.14	.14
Pale oil, "25" .898 spec. grav.	.12	.12	.12
Pale oil, "28" .892 spec. grav.	.08	.08	.08
Paraffin Wax:			
120-122 a.m.p., per lb.	.06⅛	.06⅛	.06⅛
125-127 a.m.p., per lb.	.06¼	.06¼	.06¼
130-132 a.m.p., per lb.	.06½	.06⅝	.06⅝
135-137 a.m.p., per lb.	.07¼	.07¼	.07¼
Petrolatum, in bbls., carload lots, per lb.:			
Amber	.03¾	.03¼	.03¼
Light amber	.03¾	.03¾	.03¾
Cream	.06	.06	.06
Lily white	.08	.08	.08
Snow white	.10	.10	.10

†All lub prices in barrels.

LOS ANGELES EXPORT PRICES

	Dec. 8		Dec. 1		Nov. 24	
Kerosene water white	.05	.05½	.05	.05½	.05	.05½
U. S. Motor Gasoline, 54-56 437 end point	.07	.09	.07½	.09	.07½	.09

CRUDE OIL PRICES

Arkansas and North Louisiana

Caddo, 38° and above	$1.95
35° to 37.9°	1.85
32° to 34.9°	1.75
Below 32°	1.65
Homer, 35° and above	1.75
32° to 34.9°	1.65
31° to 32.9°	1.55
Below 31°	1.40
Haynesville, 33° and above	1.65
Below 33°	1.55
El Dorado, 33° and above	1.65
Below 33°	1.55
Bull Bayou, 38° and above	1.75
35° to 37.9°	1.60
32° to 34.9°	1.45
Cotton Valley	1.10
De Soto	1.80
Crichton	1.60
Bellevue	1.65
*Stephens, Ark:	
Below 26°	1.20
26° and above	1.40

*Posted by Atlantic Oil Producing Co.

Smackover:

(Standard Oil Co. of Louisiana)

Below 24°	.85
24° to 24.9°	1.15
25° to 25.9°	1.20
26° to 26.9°	1.25
27° and above	1.30

(Atlantic Oil Producing Co.)

Below 23°	.90
23° to 23.9°	.95

Wyoming, Montana, New Mexico and Colorado

Rock Creek (Wyo.)	1.75
Salt Creek:	
29° to 29.9	1.23
30° to 30.9°	1.31
31° to 31.9°	1.39
32° to 32.9°	1.47
33° to 33.9°	1.55
34° to 34.9°	1.63
35° to 35.9°	1.71
36° to 36.9°	1.79
37° and above	1.87
Big Muddy	1.75
Mule Creek	1.25
Grass Creek (light)	1.90
Elk Basin	1.90
Lance Creek	1.90
Osage	1.90
Cat Creek (Mont.)	1.90
Sunburst (Mont.)	1.55
Lost Soldier	1.10
Greybull and Torchlight	1.90
Hamilton Dome	1.55
Hogback, (N. Mex.)	1.95
Artesia, (N. Mex.)	1.35
Florence (Colo.)	1.35

Lost Soldier and Lander based on contracts.

Oklahoma, Kansas, North and East Central Texas

*Prairie Oil & Gas Co. and other major purchasing companies except as noted.

28° to 28.9°	1.15
29° to 29.9°	1.23
30° to 33.9°	1.31
31° to 31.9°	1.39
32° to 32.9°	1.47
33° to 33.9°	1.55
34° to 34.9°	1.63
35° to 35.9°	1.71
36° to 36.9°	1.79
37° to 37.9°	1.87
38° to 38.9°	1.95
39° to 39.9°	2.03
40° to 40.9°	2.11
41° to 41.9°	2.19
42° to 42.9°	2.27
43° to 43.9°	2.35
44° to 44.9°	2.43

For crude under 28° gravity, bought only from producers having connections on November 1, 1925, Prairie Oil & Gas Co. pays on a basis of an 8-cent spread for each degree.

*Humble Oil & Refining Co.

(North Texas, Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran.)

Below 28°	1.07

Other grades same as Prairie Oil & Gas.

*Magnolia Petroleum Co.

(Oklahoma, Kansas and Texas.)

Below 28°	$1.07

Other grades same as Prairie Oil & Gas Co.

Corsicana heavy	$1.05
Thrall	1.00

*The Texas Co.

(Oklahoma and Texas)

Below 28°	$1.07

Other grades same as Prairie Oil & Gas Co.

Panhandle:

(Posted by Amarillo Refining Co.)

28° to 30.9°	.90
31° to 33.9°	1.05
34° to 36.9°	1.25
37° to 39.9°	1.45
40° and above	1.50

Gypsy Oil Co.—

Bristow, Glenn Pool, Morris and Perryman:

25° to 25.9°	.91
26° to 26.9°	.99
27° to 27.9°	1.07

Other grades same as Prairie Oil & Gas Co.

Gulf Coast

Grade A	1.50
Grade B	1.25
Luling (Magnolia)	1.40
Laredo (Magnolia Petroleum Co.)	.85
Lockhart (Magnolia)	2.25
Rockdale-Minerva (Milam County)	1.25
Callihan (Live Oak-McMullen)	2.05
Webb, Jim Hogg, Zapata	1.15
*High Island	1.20

*Posted by Sun Oil Co.

Somerset

Below 30°	1.25
30° to 32.9°	1.35
33° to 35.9°	1.80
36° to 38.9°	1.95
39° to 41.9°	2.10
42° and above	2.35

*Posted by Grayburg Oil Co.

Eastern States

Penna Grade Oil in New York Transit Lines	3.40
Bradford District Oil in National Transit Lines	3.40
Penna Grade Oil in National Transit Lines	3.30
Penna Grade Oil in Southwest Pa. Pipe Lines	3.30
Penna Grade Oil in Eureka Pipe Line Lines	3.25
Penna Grade Oil in Buckeye Pipe Line Lines	3.05
Cabell Grade Oil in Eureka Pipe Line Lines	2.10
Corning Grade Oil in Buckeye Pipe Line Lines	1.60
Somerset Medium Oil in Cumberland Pipe Line Lines	2.20
Somerset Light Oil in Cumberland Pipe Line Lines	2.35
Ragland Grade Oil in Cumberland Pipe Line Lines	1.15
Gaines	2.70
Lima	1.98
Wooster	2.00
Illinois	1.87
Indiana	1.78
Princeton	1.87
Plymouth	1.40
Waterloo	1.00
Oil Springs, Canada	2.45
Petrolia, Canada	2.38
*Western Kentucky, 36° and above	1.80
*Western Kentucky, 35° to 35.9°	1.70
*Western Kentucky, 32.9° and below	1.60
Cumberland, Barren and Monroe Counties (Kentucky), (Paragon Development Co.)	2.35

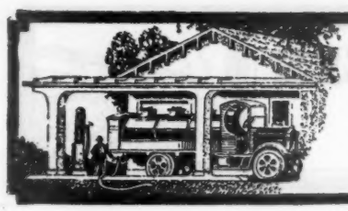
*Prices for Warren, Allen, Hancock, Simpson and Ohio Counties by Indian Refining Co.

Mexican Crude

*Tuxpam light (f.o.b. Mex. ports)	1.75
‡Panuco heavy (f.o.b. Mex. ports)	1.45
Tuxpam (New York)	2.25
Panuco (New York)	1.82

*Plus 30.45c tax. ‡16.94c tax.

(California Crude Prices on Page 132)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, Dec. 8.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Chicago Dist.—				
†Less than 100 gals.	16.0	18.0	...	11.0
Decatur, Ill.	11.0	13.0	...	11.5
East St. Louis	15.1	17.35	...	10.6
Joliet	16.4	18.4	...	11.7
Peoria	16.5	18.5	...	11.7
Quincy	16.2	18.2	...	11.3
Davenport, Ia.	18.5	20.5	2.0	11.9
Des Moines	15.5	17.5	2.0	11.9
Keokuk	18.5	20.5	2.0	11.9
Sioux City	18.0	20.0	2.0	11.5
Duluth, Minn.	15.5	17.5	2.0	12.6
Minneapolis	17.2	19.2	2.0	12.6
La Crosse, Wis.	19.2	21.2	2.0	12.1
Milwaukee	18.1	20.1	2.0	11.3
Madison	18.3	20.3	2.0	11.5
Detroit, Mich.	18.8	20.8	2.0	12.2
Grand Rapids	18.7	20.7	2.0	12.1
Saginaw	18.9	20.9	2.0	12.3
Evansville, Ind.	19.0	21.0	3.0	11.5
Fort Wayne	19.4	21.4	3.0	11.9
Indianapolis	19.2	21.2	3.0	11.7
South Bend	19.4	21.4	3.0	11.9
Fargo, N. D.	19.9	21.9	1.0	14.6
Huron, S. D.	16.0	18.0	3.0	12.1
Sioux Falls	18.0	20.0	3.0	12.6
*K. C., Mo.	17.9	19.9	3.0	10.3
*Springfield	18.8	20.8	3.0	11.2
*St. Louis	17.6	19.9	2.5	11.0
*St. Joseph	18.0	20.0	2.5	10.9
Wichita, Kan.	10.8	12.8	2.0	10.8
Bartlesville, Ok.	16.9	18.9	3.0	9.9

*State tax is 3c. Remainder is city tax.
†Quantity price on more than 100 gallons, 15.0.

The following monthly rebate system is effective on tank wagon schedules throughout the territory of the Standard Oil Co. of Indiana: Over 750 gallons, ½ cent; over 2,000 gallons, ¾ cent; over 3,000 gallons, 1 cent; over 6,000 gallons, 1½ cents; over 10,000 gallons, 2 cents. If quantity bought during the year is equal to 12 times the monthly agreed purchases the discount will be paid or credited on the entire quantity less monthly payments. Service station customers will receive discount of 1 cent a gallon on purchases amounting to 200 gallons a month or 2,400 gallons a year; and 2 cents a gallon on 600 gallons a month or 7,200 gallons a year.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Newark, N. J.	15.0	17.5	...	14.0
Atlantic City	15.0	....	...	14.0
Annapolis, Md.	17.0	....	...	14.0
Baltimore	17.0	20.0	2.0	14.0
Cumberland	17.0	20.0	2.0	14.0
Washington	17.0	20.0	2.0	14.0
Norfolk, Va.	18.0	21.0	3.0	14.0
Petersburg	18.0	....	3.0	14.0
Danville	18.0	....	3.0	14.0
Richmond	18.0	21.0	3.0	14.0
Roanoke	18.0	21.0	3.0	14.0
Keyser, W. Va.	18.5	....	3.5	14.0
Charleston	18.5	21.5	3.5	14.0
Parkersburg	18.5	21.5	3.5	14.0
Wheeling	18.5	21.5	3.5	14.0
Charlotte, N. C.	19.0	22.0	4.0	14.0
Hickory	19.0	....	4.0	14.0
Mt. Airy	19.0	....	4.0	14.0
Salisbury	19.0	....	4.0	14.0
Charleston, S. C.	20.0	23.0	5.0	14.0
Columbia	20.0	23.0	5.0	14.0

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Atlanta, Ga.	21.0	24.0	3.5	13.0
Augusta	22.0	25.0	3.5	14.5
Macon	22.0	25.0	3.5	13.5
Savannah	17.0	20.0	3.5	13.0
Birm'gham, Ala.	19.0	22.0	2.0	14.5
Mobile	18.0	21.0	2.0	11.0
*Montgomery	20.0	23.0	3.0	16.5
Clarkdale, Miss.	19.0	22.0	3.0	12.0
Jackson	19.0	22.0	3.0	11.0
Natches	18.5	21.5	3.0	11.5
Vicksburg	18.5	21.5	3.0	11.5
Jacksonville, Fla.	20.0	23.0	4.0	13.0
Miami	22.0	25.0	4.0	14.5
Pensacola	20.0	23.0	4.0	13.5
Tampa	20.0	23.0	4.0	13.0
Lexington, Ky.	18.0	21.0	3.0	14.0
Covington	19.0	22.0	3.0	14.0
Louisville	20.0	23.0	3.0	12.0

*In addition to the State tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and ½ cent on kerosene.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
*Pittsburgh, Pa.	17.0	22.0	...	13.0
*Philadelphia	17.0	22.0	...	13.0
*Scranton	17.0	22.0	...	13.0
*Allentown	17.0	22.0	...	13.0
Altoona	17.0	22.0	...	13.0
*Erie	17.0	22.0	...	13.0
Dover, Del.	19.0	22.0	2.0	13.0
Wilmington	19.0	22.0	2.0	13.0
Springf'ld, Mass.	17.0	19.0	...	14.5
Worcester	17.0	19.0	...	14.5
Boston	17.0	20.0	...	14.0
Providence, R. I.	18.0	21.0	1.0	14.0
Hartford, Conn.	19.0	21.0	2.0	13.5
New Haven	19.0	22.0	2.0	14.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

SOUTHWESTERN DISTRICT

***Magnolia Petroleum Co.**

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Dallas, Tex.	17.0	19.0	1.0	11.0
Fort Worth	14.0	16.0	1.0	10.0
Houston	17.0	19.0	1.0	12.0
San Antonio	16.0	18.0	1.0	10.0
El Paso	18.0	19.0	1.0	13.0
Texarkana	16.0	20.0	1.0	12.5
Muskogee, Okla	18.0	21.0	3.0	11.0
Oklahoma City	18.0	21.0	3.0	12.0
Tulsa	18.0	21.0	3.0	12.0
Little Rock	17.5	20.5	4.0	10.0
Ft. Smith, Ark.	18.0	21.0	4.0	11.0

*The following is the schedule of discounts on gasoline adopted by the Magnolia Petroleum Co. in Texas sales and the discounts are graded according to gallonage: Over 750 gallons a month, ½ cent; over 2,000 gallons, ¾ cent; over 3,000 gallons, 1 cent; over 6,000 gallons, 1½ cents; over 10,000 gallons, 2 cents; over 9,000 gallons a year, ½ cent; over 24,000 gallons a year, ¾ cent; over 36,000 gallons a year, 1 cent; over 72,000 gallons a year, 1½ cents; over 120,000 gallons a year, 2 cents.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 600 gallons a month, 2 cents; over 2,400 gallons a year, 1 cent; over 7,200 gallons a year, 2 cents.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Albany, N. Y.	17.0	....	...	14.5
*New York	17.0	....	...	14.5
Buffalo	17.0	....	...	14.5
Rochester	17.0	....	...	14.5
Syracuse	17.0	....	...	14.5
Boston, Mass.	17.0	....	...	....
Providence, R. I.	18.0	....	1.0	....
Augusta, Me.	21.0	....	3.0	14.5
Manchester, N. H.	19.0	....	2.0	14.5
Burlington, Vt.	21.0	....	2.0	14.5

*Price in steel barrels.
Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 or 3 cents higher than tank wagon price.

OHIO

Standard Oil Co. (Ohio)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
All Ohio points.	18.0	20.0	2.0	13.0

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Casper, Wyo.	19.5	21.5	2.5	13.0
Cheyenne	19.5	21.5	2.5	14.5
Albuquerque, N. Mex.	23.5	26.5	3.0	16.5
Salt Lake, Utah	22.0	24.0	3.5	18.0
Denver, Colo.	18.0	20.0	2.0	14.5
Pueblo	18.0	20.0	2.0	14.5
Butte, Mont.	21.0	21.0	2.0	16.0
Helena	23.0	25.0	2.0	17.0
Boise, Idaho	23.0	25.0	3.0	20.0

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
*New Orleans	17.0	20.0	3.0	10.5
Alexandria	16.5	19.5	2.0	11.5
Baton Rouge	15.5	18.5	2.0	10.0
LaFayette	16.5	19.5	2.0	11.0
Lake Charles	17.0	20.0	2.0	11.5
Shreveport, La.	15.5	18.5	3.0	10.5
Memphis, Tenn.	16.5	19.5	3.0	12.5
Chattanooga	17.0	20.0	3.0	13.0
Knoxville	18.0	21.0	3.0	13.5
Nashville	17.0	20.0	3.0	13.0
Bristol	18.5	21.5	3.0	13.0
Little Rock, Ark.	18.5	21.5	4.0	10.5

*Tax of 3 cents includes city tax of 1 cent.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
San Francisco	16.0	20.0	2.0	15.5
Los Angeles	12.5	16.5	2.0	15.5
Fresno	16.5	20.5	2.0	17.5
Reno, Nev.	21.5	25.5	4.0	19.0
Portland, Ore.	17.0	21.0	3.0	16.5
Seattle, Wash.	16.0	20.0	2.0	16.5
Spokane	20.0	24.0	2.0	20.5
Tacoma	16.0	20.0	2.0	16.5
Phoenix, Ariz.	23.0	26.0	3.0	21.5

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline Tank wagon	Gasoline Service station	Gasoline Incids tax of	Kero. Tank wagon
Omaha	16.25	18.25	2.0	11.5
Crawford	19.0	....	2.0	12.25
McCook	19.75	21.75	2.0	13.0
Norfolk	18.75	20.75	2.0	12.0
North Platte	19.75	21.75	2.0	12.75
Scottsbluff	19.25	21.25	2.0	12.25

TANK WAGON CHANGES

December 1.—Atlantic Refining Co. advanced tank wagon and service station prices of gasoline 1 cent in Massachusetts, Rhode Island and Connecticut, and kerosene prices a half cent at Springfield, Worcester and Hartford. Standard Oil Co. of New York equalized tank wagon prices of gasoline throughout its territory to 17 cents.

December 4.—Standard Oil Co. of Louisiana advanced tank wagon and service station prices of gasoline a half cent in Louisiana and 1 cent in Arkansas and Tennessee, except at Memphis, where prices were raised 1½ cents.

December 5.—Standard Oil Co. of New Jersey advanced kerosene prices a half cent throughout its territory. Standard Oil Co. of Indiana advanced tank wagon and service station prices of gasoline 2 cents at Minneapolis.

OKLAHOMA REFINED PRICES ARE STEADY

(Continued from Page 28)

ently caused refiners to refuse to sell any a better tone in this market and apparof the product on the spot market below 12⅝ cents. The 60-62 400 gasoline, however, was moved largely but this was perhaps due to the scarcity of the product. Quotations were steady at 11¾ to 12 cents. The 68-70 350 gasoline also was unchanged at 13½ to 13¾ cents.

Natural Gasoline and Blends

Natural gasolines, especially Grade C, were firm during the week. By Monday and Tuesday little of Grade C could be found below 9½ cents with some sales being made as high as 9¾ cents. Grades A and Double A moved at 11¼ and Grade B and Double B at 10¼ to 10½ cents. Grade B showing the greater strength of the two. The A grades showed some signs of sluggishness.

Blends continued in fair demand and unchanged in prices. The 60-62 450 grade still was obtainable at 9¾ to 10 cents and 64-66 437 blend at 10¾ to 11 cents.

Kerosene and Distillates

Prices of kerosene and distillates also were steady during the week although kerosene was perhaps slightly stronger at its quotations than last week as a reflection of an acute shortage of kerosene in north Texas and the higher prices there. A few refiners advanced 41-43 water white quotations to 5⅛ cents but some of the product still could be obtained at 5 cents. The 42-44 water white moved at 5½ cents generally and the 40-41 prime white at 4⅞ to 5 cents.

Quotations on 38-40 distillates continued to range from 4 to 4¼ cents and on the 36-38 grade at 3⅞ to 4 cents.

Fuel Oil and Gas Oil

Fuel oil and gas oil were perhaps the strongest products of the Group 3 market, all grades increasing in strength with some price advances during the week. As in kerosenes, part of this added strength can be attributed directly to the north Texas situation where prices of fuel oil and gas oil soared as a result of heavy local demand. Some 24-26 fuel oil still could be obtained for $1.25 but this was rare, the bulk of the movements being at $1.27½. Many refiners held out for $1.30. The 22-26 grade was strong at $1.25 and the 18-22 product at $1.22½ to $1.25, an advance of 2½ cents a barrel during the week. The 28-30 grade was a little more active, commanding prices of $1.35 to $1.40.

Actual market prices of gas oil were unchanged at 3½ to 3⅝ cents on dark grades and 3⅝ to 3¾ cents on straw, but the quotations were strong.

Lubricants and Wax

Lubricating oils were unchanged during the week. Prices continued steady with all grades in fair demand. A few spot wax sales were reported at 5½ cents, the previous week's quotations.

CALIFORNIA PRICES

Gravity	Long Beach	Richfield Huntington Beach Brea-Olinda	Rosecrans	Torrance Inglewood	Whittier La Habra Montebello	Coyote	Santa Fe	Kern River Newhall McKittrick	Midway-Sunset Elk Hills	Lost Hills Belridge	Coalinga	Wheeler Ridge
14°	$ .85	$ .85	....	$ .85	$ .85	$ .85	....	$ .75	$ .75	$ .75	$ .75	$ .75
15°	.87	.87	....	.87	.85	.85	....	.75	.75	.75	.75	.75
16°	.90	.90	....	.90	.85	.85	....	.75	.75	.75	.75	.75
17°	.94	.94	....	.94	.85	.85	....	.75	.75	.75	.75	.75
18°	.98	.98	....	.98	.85	.85	....	.75	.75	.75	.75	.75
19°	1.02	1.02	....	1.02	.85	.85	....	.75	.75	.75	.75	.75
20°	1.06	1.06	....	1.06	.87	.85	....	....	.79	.79	.79	.78
21°	1.10	1.10	....	1.10	.89	.94	....	....	.84	.84	.84	.81
22°	1.14	1.14	....	1.14	.91	1.00	....	....	.92	.92	.89	.84
23°	1.18	1.18	....	1.18	.94	1.06	....	....	1.00	1.00	.94	.87
24°	1.22	1.22	....	1.22	.97	1.12	.97	....	1.08	1.08	.99	.90
25°	1.26	1.26	....	1.26	1.00	1.18	1.05	....	1.16	1.16	1.04	.93
26°	1.30	1.30	$1.30	1.30	1.03	1.24	1.13	....	1.24	1.24	1.09	.96
27°	1.34	1.34	1.34	1.34	1.06	1.30	1.21	....	1.32	1.32	1.14	.99
28°	1.38	1.38	1.38	1.38	1.09	1.36	1.28	....	1.40	1.40	1.19	....
29°	1.42	1.42	1.42	....	1.12	1.42	1.94	....	1.48	1.48	1.24	....
30°	1.46	1.46	1.46	....	1.15	1.48	1.40	....	1.56	1.56	1.29	....
31°	1.52	....	1.52	....	....	....	1.46	....	1.64	1.64	1.34	....
32°	....	....	1.58	....	....	....	1.52	....	1.72	1.72	1.39	....
33°	....	....	1.64	....	....	....	1.60	....	1.80	1.80	1.44	....
34°	....	....	1.70	....	....	....	1.68	....	....	1.88	1.49	....
35°	....	....	1.76	....	....	....	1.76	....	....	....	1.54	....
36°	....	....	1.84	....	....	....	1.84	....	....	....	....	....
37°	....	....	1.92	....	....	....	1.92	....	....	....	....	....
38°	....	....	2.00	....	....	....	2.00	....	....	....	....	....
39°	....	....	2.08	....	....	....	....	....	....	....	....	....
40°	....	....	2.16	....	....	....	....	....	....	....	....	....
41°	....	....	2.24	....	....	....	....	....	....	....	....	....
42°	....	....	2.30	....	....	....	....	....	....	....	....	....

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SINCLAIR OILS

Ad No. 10

Combined Processes in Operation

Cross Cracking Units and Gray Towers for Vapor Treating at Barnsdall Refinery Producing Finished Gasoline at One Operation

By C. O. Willson

A finished cracked gasoline except for a hypochlorite sweetening treatment in one operation is the latest development in the manufacturing practices of the refining industry. Credit for this achievement goes to the engineers of the M. W. Kellogg Co., the Cross Engineering Co., Gray Process Co. and the manufacturing heads of the Barnsdall Refining Co. at whose Barnsdall, Okla., refinery the unique plant is now in operation.

This plant, shown in the accompanying photo, consists of two 1,000-bbl. Cross cracking units directly connected to three units of the Gray process for the treatment of the cracked products in the vapor phase. Mid-Continent gas oil is the charging stock of the cracking stills and United States motor end point gasoline is the product of the treaters commonly known as the Gray towers. The complete operation represents the first time in the industry that distillation under high pressure and temperatures, fractionation through bubble towers with final treatment of the cracked vapors in the vapor phase, has been accomplished in one uninterrupted operating cycle. Based on the results obtained at the Barnsdall plant, it represents an important contribution to the economical manufacture of a type of gasoline which is receiving more and more attention from the marketing fraternity.

Before passing to the description of the installation a brief resume of past practices at the Barnsdall refinery will serve to explain and emphasize the importance of present operations. Early this year the first commercial installation of the Gray process was placed in operation. It was used to treat the cracked distillate of another cracking process which is no longer in operation. At that time the product of the cracking stills was rerun in shell stills after acid treatment, to secure the finished gasoline.

To take the place of acid treating, one of the Gray units was installed, the vapors being passed to the tower after passing through the bubble tower of the rerun still. The operation proved satisfactory to all concerned and this method was continued until the cracking units were dismantled. At the annual meeting of the Western Petroleum Refiners Association in Kansas City last spring, the results obtained from the installation were explained by engineers connected with the Gray company. Based on data furnished by F. E. Holsten, vice president and manufacturing head of the Barnsdall Refining Co., these engineers explained the economical features of this method of treating when compared to the usual practice of using sulphuric acid.

Large Saving

It was shown that by the Gray process, which provided for the passing of the vapors through half roast Georgia fuller's earth, 60-90 mesh, there was a 6 per cent increase in gasoline recovery from the cracked distillate with a better finished product than when acid was used. It was also stated that the operating cost of the Gray method was approximately one-eighth that of acid treatment with the ratio of material costs, $100 to $16.92 in favor of the Gray method. Based on these data it was conservatively estimated that a refiner running 1,000 bbls. of pressure distillate per day of 60 per cent gasoline content would save $6,180 monthly by use of the Gray process.

With this practical demonstration of economy it is not surprising that the Barnsdall operators were desirous of continuing this treating method when the company decided to install a different type cracking process. Consultation among the engineers representing the companies previously mentioned finally resulted in the decision to go one step further. The engineers were confident after investigation that the maximum of economy could be secured by doing away with the rerun operation and treating the vapors direct from the Cross units which for some time have produced a gasoline which met U. S. Motor end point specifications.

Combination Successful

The combination of the Cross and Gray units have been in operation only two weeks. For that reason final data on the operation, conclusive as that secured when the Gray equipment was operated with the rerun still, is not available at this time. Both the Cross and Gray units are new and as every plant operator knows it usually requires several weeks to secure representative data with new installations of this type.

In the language of one of the stillmen it can be said, however, at this time that "it works," an opinion with which the engineers concerned agree. The latter have never had any concern except for the mechanical features and the operation has been long enough to remove any doubts as to this phase of the installation. It is certain that to the economies of the first installation have been added the savings which accrue to the doing away of all rerun operations. This means less tankage for storage, substantial reduction in evaporation loss, the release of rerun stills for other uses and labor economy, since the combined operation requires no more employes than the Cross units alone.

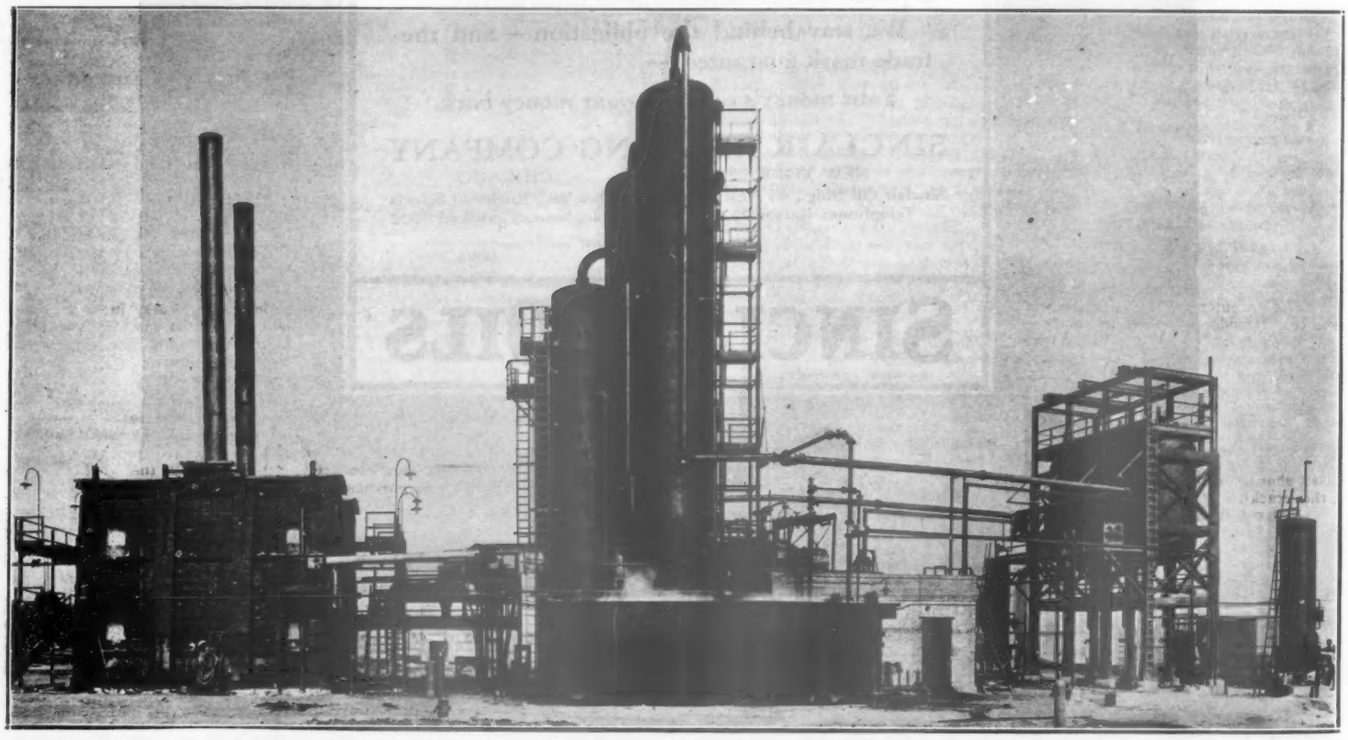
An idea of the probable yields can be gauged from the fact that the No. 1 Gray tower in use a little over two weeks has handled 536 bbls. of 30 color gasoline per ton of fuller's earth. It was still in operation the middle of last week when these data were obtained with nothing to indicate what the final yield would be when it was found necessary to recharge the tower. The clay costs about $5 per ton for each using. Six tons of clay were charged in the first tower. The low clay cost is due to the fact that the clay can be used several times after burning.

Operated in connection with the rerun still previously explained, a tower of similar design had a record of 1,300 bbls. of gasoline per ton of clay. Laboratory work has shown that the yields will vary with the different type cracked distillates. The latter, of course, vary with the quality of the charging stock, type of installation and method of operation.

Refiners who treat with acid are aware of this difference in cracked distillate and the direct effect it has on treating costs. Experimental data indicate, however, that the Gray process will show the same relative savings in treating costs with all types of pressure gasoline.

The accompanying photo shows the main features of the installation and the diagram a cross section of the Gray tower arrangement with the main connections leading to the Cross units. The diagram also shows the gas separator and the pump house and accumulator tank which handle the reflux from the towers. The Cross units are the standard 1,000-bbl. units which have been installed at several refineries during the past year. In the Barnsdall installation the bubble tower is 6 feet higher and the oil coil in the bubble tower has been enlarged so as to do away with the water coil. The larger bubble tower was deemed necessary to secure more efficient fractionation. The enlargement of the oil coil is more important. In other installations the gasoline end point was controlled by means of the water coil and the smaller oil coil to preheat the incoming charge to stills.

This end point control is now secured



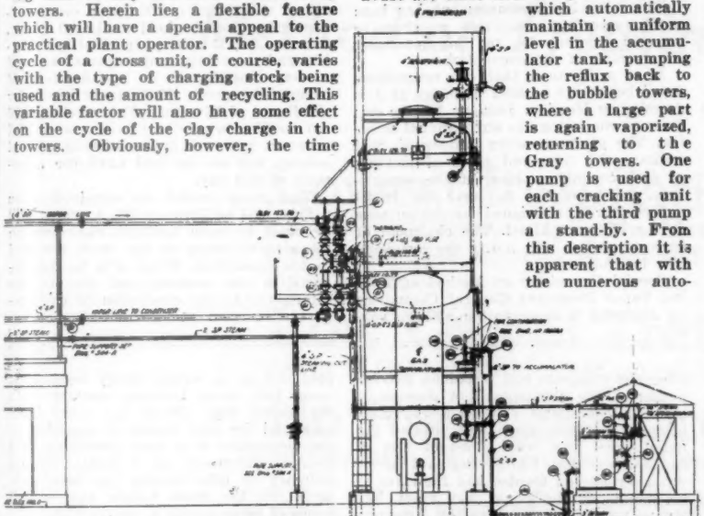
Two Cross cracking units with three Gray towers in operation at the Barnsdall, Okla., refinery of the Barnsdall Refining Co.

by the enlarged oil coil. A specially designed Brown instrument in the control house automatically regulates the flow of oil in the coil, part of the oil by-passing past the tower when necessary. This arrangement has added to the heat exchange efficiency of the entire operation with no sacrifice in control.

No changes were made in the Cross units due to the fact that they were to be operated with the Gray towers. The units can be disconnected from the Gray towers and operated separately in the usual manner. In fact, this was done a few days before the Gray towers were completed. The connections which make this arrangement possible are shown in the photo. The vapors coming from the bubble tower can be sent either to the towers or with that line closed, passed direct to the water condenser adjoining the control house.

Flexible Feature

A 4-inch insulated vapor line connects each cracking unit to the Gray towers. The vapor lines are connected to a manifold arrangement by means of which it is possible to connect either cracking unit to any one of the three Gray towers. Herein lies a flexible feature which will have a special appeal to the practical plant operator. The operating cycle of a Cross unit, of course, varies with the type of charging stock being used and the amount of recycling. This variable factor will also have some effect on the cycle of the clay charge in the towers. Obviously, however, the time



Side section of Gray tower at Barnsdall installation.

cycles of the cracking units and the towers will not be the same. The extra tower provides for any overlapping assuring that there will be no shut-downs because of inability to treat the vapors from the crackers. In the event the cracking cycle is completed before the clay needs to be changed in the tower, the same tower can be used when the cracking cycle starts again. In the opposite situation the vapors through the manifold arrangement can be quickly passed to the stand-by tower.

The main outline of one of the towers is shown in the diagram. Each tower consists of an outer shell which is heavily insulated. Inside this shell is an inner shell which holds the clay. The vapors pass from the manifold to the outer shell, entering near the bottom. After passing around the inner shell the vapors enter the smaller shell at the top. After passing through this shell or chamber which has a capacity of eight tons of clay, the vapors go to the water condenser, shown alongside the bubble towers of the cracking process. After condensation the gasoline passes with the non-condensed gases back to the gas separator, shown to the right of the Gray towers. Here in the usual manner through automatic control the gasoline is pumped to the storage tanks.

The following dimensions will explain the arrangement of the outer and inner shells. The over-all length of the outer shell, including the manhead and neck, is 16 feet 9¾ inches. The diameter of the shell is 8 feet 10⅛ inches. The over-all height of the inner shell is 12 feet 2½ inches, including the dish at the bottom. From the top of the inner shell to the top of the dish, where the screen supporting the clay is located, is 10 feet 8¾ inches. This leaves a bottom space between the outer and inner shells, where the vapors first enter, of 1 foot 6⅝ inches. The diameter of the inner shell is 8 feet ½ inch. The shells are of riveted and welded construction and have a working pressure of 75 pounds.

The screen is supported by a perforated plate of 60x100 mesh with ⅝-inch holes and 1¼-inch centers. The aluminum screen of spiral weave is 18 by 200 mesh and supports the clay.

The clay is charged through the opening at the top. The elevator, which will convey the clay from the ground to the top of the tower, has not been completed and at the present time this is done by employes.

Handling of Reflux

One feature of special interest is the manner in which the reflux is handled. The reflux from the outer and inner shells, which amounts to approximately 7 per cent of the total gasoline yield, goes by gravity to the accumulator tank shown beside the small pump house to the right of the towers. Inside the pump house are three electrically driven pumps which automatically maintain a uniform level in the accumulator tank, pumping the reflux back to the bubble towers, where a large part is again vaporized, returning to the Gray towers. One pump is used for each cracking unit with the third pump a stand-by. From this description it is apparent that with the numerous automatic control features, the combined processes will be easy to operate.

Quality of Gasoline

The increase in gasoline yield from the vapor phase refining over acid treatment has been mentioned. Closely associated with this feature is the claim that the finished product is of better quality. This development has to do with the difference in chemical action of the two methods. It has been well established that treating cracked distillates with acid while it ordinarily results in a gasoline meeting commercial requirements, often times destroys certain desirable constituents.

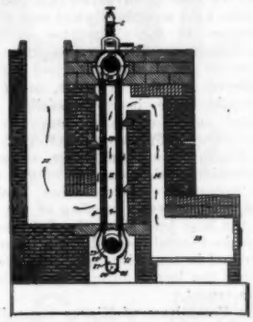
This is especially important at the present time when the refining industry has waked up to the fact that cracked gasoline properly refined has constituents which give it greater motor fuel value than the product obtained from straight run distillation. The olefin series of hydrocarbons present in cracked distillates in varying proportions are especially valuable in gasoline from an anti-knock standpoint. With acid treatment certain members of the olefin series are absorbed. This means not only the loss of a desirable property, but at the same time partially accounts for the loss in volume reflected in the lessened gasoline yield. At the same time certain other fractions are converted to constituents of a boiling point range higher than gasoline.

It is claimed that the chemical action resulting when the vapors are passed through clay only removes the undesirable properties. There is practically no loss of olefins, although the clay acting as an absorption catalyst removes the unstable diolefins, which caused the refiners so much trouble in the way of color and gummy substances in the early days of cracking. This property of the clay assures the maximum recovery of the fractions coming within the boiling range of gasoline.

RECENT PATENTS

(Continued from Page 129)

way in which said tubes are arranged, means for causing products of combustion to circulate through said passageway longitudinally of said tubes, endless chains arranged in oppositely-disposed tubes of the respective banks, sheaves or the like in said headers around which said chains travel, means for actuating said chains so as to remove carbon that collects on the interior of said tubes, a carbon collection chamber at the bottom



side of one header, an outlet from said chamber, and means operable from the exterior of said chamber for discharging the carbon that collects in said chamber through said outlet.

TESTS PROVE ETHYL GASOLINE SATISFACTORY

(Continued from Page 129)

by the men themselves, these men handling the fluid.

"The gasoline was treated with from three to four times the normal treatment for commercial ethyl gasoline. There were no reports of any difficulties at all, although the men knew that a certain amount of danger was to be encountered in handling the concentrated ethyl fluid.

"I made a 10-hour non stop flight in which we used ethyl fluid (tetra-ethyl lead), and during the 10-hour flight we were leaning over the fusillage with the exhaust gases coming over our faces; and we felt no bad effects.

"After that particular flight I was physically examined very carefully and the medical report was that the doctor hoped that I was not as uninteresting in every way as I was pathologically.

"This particular anti-knock fuel, ethyl gasoline, is the only satisfactory fuel which we have at the present time.

"I understand that Great Britain, where they have been able to obtain high test gasoline of anti-knock qualities from Sumatra, they have not, until recently, been forced to go into the addition of chemicals for anti-knock gasoline, but that with the diminuation of the availability of this particular type of gasoline they have been forced to go into experimentation of treated gasoline to secure anti-knock properties for high compression aeronautic work.

"I understand that Great Britain as well as some other foreign countries are making negotiatiors for the purchase of their requirements of ethyl fluid (tetra-ethyl lead).

"We are convinced that no danger can result from ethyl gasoline in aircraft and that the hazard of handling the concentrated ethyl fluid is so small as compared with the hazard from fire or crashes that we hope to be able to continue to use it.

"It is of particular advantage on distant service where we cannot get the high quality gasoline that we need; and we can produce this high quality gasoline by the addition of ethyl fluid (tetra-ethyl lead).

"Therefore, as a result of considerable investigation we feel that there is no difficulty whatever in using this fluid and we hope that a way will be found to render it possible for us to obtain this fuel in quantities from time to time."

Officials of the Ethyl Gasoline Co. confirmed the statement of Commander Wilson that foreign governments were negotiating for tetra-ethyl lead. Tests are being conducted by various foreign governments, including the British Air Ministry. Up to this time no ethyl gasoline has been sold to the public in foreign countries, but it is intimated that in case of an unfavorable decision in the United States the marketing of ethyl gasoline abroad would not be affected, but, in fact, might be pushed. The United States Navy is still using ethyl fluid in aircraft.

OIL BURNER MAKERS PLAN BIG MEETING

DETROIT, Mich., Dec. 7.—Extensive preparations already are being made for the annual convention of the American Oil Burner Association to be held at the Book Cadillac Hotel here April 6, 7 and 8. More than 1,000 persons are expected at the convention.

One of the features of the convention will be the oil burner exposition, at which there will be exhibits of all kinds of oil burners and everything entering into the manufacture, installation and use of the burners.

The program of the convention proper will include addresses and papers from outstanding authorities on oil burning problems. The annual business meeting will be held on the afternoon of April 7.

In addition to the program and exposition, an elaborate banquet has been arranged for the evening of April 7, at which the wives and families of the delegates will be guests. The Michigan Oil Burner Dealers' Association also has planned an entertainment for the evening of April 6.

OIL EXPERTS' REPLIES ARE BEING DIGESTED

WASHINGTON, D. C., Dec. 5.—A public hearing on the oil resources of the nation will be held by the Federal Oil Board as soon as its advisory committee completes a study of material furnished by the oil industry.

Secretary Work, in making this announcement as chairman of the board, said that it had not yet reached any conclusions, nor considered any material submitted by the oil industry.

It is now awaiting a digest of replies to questionnaires sent to more than 150 oil experts and does not plan to draw any conclusions until these have been considered and the public hearing has been completed.

DOMESTIC EXPORTS OF PETROLEUM AND REFINED PRODUCTS

		Month of October		10 Mos. Ended Oct.	
		1924	1925	1924	1925
Crude petroleum	Gals.	57,787,463	53,672,732	638,652,228	483,449,706
	$	1,831,444	2,241,880	22,882,521	21,218,389
Total refined petroleum	Gals.	342,084,764	332,508,376	3,286,739,226	3,203,534,729
	$	32,623,433	33,874,441	331,645,866	347,590,956
Gasoline, naphtha and other light products	Gals.	91,153,320	102,465,644	989,219,579	1,038,399,558
	$	11,752,849	14,690,537	142,110,476	161,941,605
Illuminating oils	Gals.	89,676,941	87,373,006	763,154,305	722,998,212
	$	8,779,031	8,202,535	74,348,760	69,275,474
Gas and fuel oils	Gals.	130,225,111	111,026,860	1,213,669,322	1,106,625,076
	$	4,569,575	3,768,455	41,237,324	41,077,632
Lubricating oils	Gals.	31,030,292	31,642,866	320,696,020	324,511,882
	$	7,521,978	7,212,614	73,949,296	75,296,247
Paraffin wax	Lbs.	30,814,323	32,960,949	322,562,613	270,628,660
	$	1,621,185	1,869,437	15,270,977	15,053,378

AMERICAN PETROLEUM INSTITUTE ENDORSES COMMITTEE OF ELEVEN

By L. M. Fanning

At a meeting held in New York on December 4, the board of directors of the American Petroleum Institute approved the report of the Committee of Eleven on Supply and Demand, which has been submitted to the Federal Oil Conservation Board and in connection with which Secretary of the Interior Work, chairman of the Federal board, recently addressed a letter to J. Edgar Pew, president of the Institute, stating that the Committee of Eleven report "barely mentioned" conservation and requesting that the Institute consider more in detail the conservation aspect, both of production and consmption. The Institute board meeting was attended by 24 members from all sections of the country, and the vote of approval of the committee's report stood 19 in favor and 5 against.

By the same vote the following motion was adopted:

"That the letter of the Federal Oil Conservation Board of November 16 (Secretary Work's letter) be referred to the Committee of Eleven for study and a report be made to this board of directors at the earliest possible date."

While details as to what transpired at the meeting are lacking, it is understood there was lively discussion of the Committee of Eleven report and particularly as to the board's attitude in view of recent developments. Sanction of the Committee of Eleven report puts the board officially on record as backing its committee's conclusions, the essential points of which were that there is no danger of immediate shortage of oil and that the availability of future petroleum supplies from the vast area of land considered by the committee as oil-bearing depends upon adequate incentives to exploration and development under private operation without Government interference.

Conference Suggested

Although this phase of the Institute directors' action cannot be overlooked it may be unduly emphasized, and further study authorized by the Committee of Eleven may clear up points concerning which the industry and the Federal Oil Conservation Board are now apparently at odds. It is understood that the Committee of Eleven will convene at an early date and that its members will probably go to Washington and determine just what additional information Secretary Work desires. The committee will, it is believed, work in close cooperation with the board, and its further study and conclusions may result in a decided clearing up of misunderstandings.

Among those attending the directors' meeting was Mark L. Requa, of California, formerly general director of the Oil Division of the Fuel Administration during the war. Mr. Requa is a director of the Institute and his recent interest in the industry's conservation problem is considered significant. His recently expressed views as to the Committee of Eleven report indicate that he probably voted against the approval of the report.

Mr. Requa, in an analysis of the report which was summarized in The Oil and Gas Journal, pointed out the necessity for cooperation between the Government and the petroleum industry in making possible a program of rational conservation, highest utilization and most efficient methods of conservation, and said that a program should be prepared by the industry and submitted to the Government for consideration and approval. The committee, according to Mr. Requa, failed to grasp the "golden opportunity and offer a constructive program" to meet the suggestions contained in President Coolidge's letter appointing the Federal Oil Conservation Board.

The matter of approval of the Committee of Eleven report came up immediately the board got in session, it is understood. That the matter should have been taken up at this time was not wholly expected. It was thought, the report having been handled as a committee affair and submitted as such to the Federal Oil Conservation Board, might indicate its status would remain unchanged, particularly in the light of the question of its completeness raised by Secretary Work and of other criticisms within the industry. In any event, delaying action on the report until the further study of the question of conservation suggested in Secretary Work's letter was made, seemed possible.

Directors on Record

It is apparent, however, that certain members of the board felt it incumbent upon the directors to go on record for or against the report, and it is possible that developments not made public made this action necessary at this time. Furthermore, the view is advanced that the meeting just held was the logical one for consideration of the Committee of Eleven report, as at the last meeting of the board the report of the committee had just been completed and was in rough, proof form. It would have been impossible, it is pointed out, for the directors to have voted on so comprehensive a report without lengthy study, and the subsequent distribution and discussion of the report was necessary before action could be taken. Last week's meeting of the board was the first held since the July meeting when the Committee of Eleven report was submitted in tentative form. At the July meeting the board authorized publication of the report.

The Committee of Eleven comprises J. Edgar Pew, president American Petroleum Institute; E. W. Marland, president Marland Oil Co.; D. M. Folsom, director General Petroleum Corp.; E. T. Wilson, chairman of the board, Continental Oil Co.; K. H. Kingsbury, president Standard Oil Co. (California); George S. Davison, president Gulf Refining Co.; W. S. Farish, president Humble Oil & Refining Co.; J. C. Donnell, president Ohio Oil Co.; W. N. Davis, president Mid-Continent Oil & Gas Association and vice president Phillips Petroleum Co.; Frank Haskell, president Tidal Oil Co., and R. L. Welch, general secretary American Petroleum Institute.

PRELIMINARY PROGRAM FOR A. P. I. ANNUAL MEETING AT LOS ANGELES

The preliminary program for the sixth annual meeting of the American Petroleum Institute which will be held in Los Angeles January 19, 20 and 21, will probably be ready shortly and in the meantime the work of lining up speakers for the general and group sessions is going forward satisfactorily. It is understood there will be a general opening session on the afternoon of the first day and that the mornings and afternoons of the two following days will be devoted to group sessions, with a general session on the evening of the second day and the annual banquet on the evening of the third day, closing the convention.

The group sessions will probably be similar to those held at the Fort Worth meeting last year. The groups will comprise those on standardization and improvement of oil drilling and production methods and equipment, heating the home with oil, storage and transportation, motor fuel and motor lubrication, oil accounting and fire prevention.

The following announcement has been made respecting committee meetings to be held January 18, the day preceding the opening of the convention:

It is understood that the committees listed below are to hold meetings at Los Angeles on Monday, January 18, the day prior to convening the sixth annual meeting. The program, when announced, will indicate the time and place of meeting of each committee. Most of the committees are scheduled to meet at 10:00 o'clock in rooms assigned for the purpose in the Biltmore Hotel. The chairman of each committee will notify the members. The list follows:

Special Committee on Method of Testing Vapor Pressure; General Committee on Railroad Transportation and its subcommittees; Committee D-2 (A. S. T. M.) on Petroleum Products and Lubricants; Committee on Standardization of Specifications for Steel and Iron Pipe for Oil Country Tubular Goods; Committee on Standardization of Rig Irons; Committee on Standardization of Wire Rope and Manila Cordage; Committee on Standardization of Standard Rigs and Derricks; Committee on Standardization of Cable Drilling Tool Joints; Committee on Standardization of Pumping Equipment and Engines as Applied to the Production of Oil; Committee on Standardization of Rotary Drilling Equipment; Committee on Standardization of Belting; Committee on Standardization of Oil Field Boilers; Committee on Standardization of Steel Storage and Production of Oil; Committee on Public Relations; Committee on Fire Prevention; Committee on Uniform Accounting.

A joint meeting of the General Committee on Standardization (composed of all national chairmen) and the Committee of the Board of Directors on Standardization will be held at 10:00 a. m., January 19, for the purpose of considering and approving any reports, as well as any amendments or modifications of completed reports, that may be ready for the Board of Directors. This meeting will not conflict in any way with the official program inasmuch as the opening general session will not be held until the afternoon of this day.

The group session on standardization will be held on January 20. A report will be made by each national chairman on the general status of the work assigned to his committee. There will be five reports in the morning and five in the afternoon. At the conclusion of each report, discussion will be invited.

U. S. WINS A POINT IN ELK HILLS APPEAL

WASHINGTON, D. C., Dec. 7.—The United States today won its appeal in the District Court of Appeals from the Decision of Chief Justice Walter I. McCoy of the Supreme Court of the District of Columbia quashing two indictments for bribery growing out of the leasing of the Elk Hills Naval Reserve in California.

The District Court of Appeals in an opinion by Chief Justice George E. Martin reversed the decision of the lower tribunal and overruled a plea in abatement filed by Albert B. Fall of New Mexico, former Secretary of the Interior, and Edward L. Doheny and his son, Edward L. Doheny, Jr., of Los Angeles, Cal. Two indictments are covered by the court's decision. One charges Fall with receiving a bribe of $100,000 to influence his official action respecting certain oil leases then pending before him. The other charges the Dohenys with giving the bribe.

The appellate court holds that the Act of February 8, 1924, taking the prosecution of oil cases, both civil and criminal, out of the hands of the Department of Justice, meant only to deprive the Attorney General of "charge and control" of the litigation and did not interfere with the right of the special counsel, Atlee Pomerene and Owen J. Roberts, to make use of the assistance of "district attorneys within their various districts and of the other authorized law officers of the Government, who might be of great service to the special counsel in discharging the duties imposed on them."

The lower court, in quashing the indictment, declared that the presence of Oliver C. Pagan, a special assistant to the Attorney General, in the grand jury room during the presentation of evidence after the Congress had forbidden participation of the Department of Justice in the oil prosecutions, violated the sanctity of the grand jury room and vitiated the indictments. The lower tribunal was of the opinion that United States District Attorney Peyton Gorden had the right to be present in the grand jury room, but that a special assistant to the Attorney General could not be lawfully present.

Attorney Frank J. Hogan, for the Dohenys, and Attorney Henry A. Wise, of New York, representing Fall, had not decided today on their future course in the cases. Counsel explained that an application might be made to the United States Supreme Court for a review of the decision of the Court of Appeals. Should this be abandoned counsel are regarded as likely to interpose demurrers to the validity of the indictments, which will raise questions of law not involved in the pleas in abatement. These demurrers would have to be argued before one of the justices holding criminal divisions, and whichever side was successful another appeal would follow.

COL. STEWART TALKS OF OIL AGITATIONS

CHICAGO, Dec. 5.—Before leaving for his two months' trip to South America and Mexico, Robert W. Stewart, chairman of the board, Standard Oil Co. (Indiana), spoke before the Exchange Club of Muskegon, Mich., on the subject of business conditions. In his address, which was the principal one of the evening, Colonel Stewart stated that he did not advocate unrestricted operation of big business but, "welcomed government of industry in so far as it is necessary to prevent all unfair practices and in so far as this supervision is practiced fairly, and is motivated by a determination to promote the welfare of the people and not the political fortunes of some individual or political party. But I do deprecate that class of interference, of which we have had too much, that harasses the business interests without serving any good purpose. Among all big business during the last two years the oil industry in particular has been singled out as a target chiefly because it came into more intimate contact with the public than almost any other business and for that reason it appealed to the demagogue as a most promising field for his endeavors. As a result, the oil industry in this country has been subjected to the most unfair and unjust series of persecutions it was ever the misfortune of any industry to have to withstand, while at the same time threatened with disruption from within through influences beyond its control."

In illustration, he pointed out the result to the industry of the overproduction of crude and of the flood of California gasoline, which, he stated, had obliged the refiners to operate at a loss and pointed out that in industries where a like condition prevailed such as in several of the agricultural industries, there was a public desire to give aid that was never manifested for the oil industry.

Colonel Stewart closed by stating that the oil industry did not seek any aid from the public but simply wanted to be allowed to work out its problems without the disastrous results that followed the interference from politicians in certain States.

On his return to Chicago, Colonel Stewart left the same day for Key West, where he will join the party aboard the yacht "Casiano," sailing for Maracaibo. Before returning to this country a visit will be made to the Mexican properties of the Pan-American Co., and to the city of Mexico.

E. D. LEVY MADE PRESIDENT

Announcement was made during the past week that E. D. Levy had been appointed president of the Pierce Petroleum Corp. It was also announced that the general offices will be moved from New York to St. Louis on December 15. Mr. Levy will have his offices at the St. Louis headquarters. He succeeds C. A. Pierce, who resigned to stay in New York City.

Mr. Levy for the past six years has spent a greater part of that time in Mexico and South America. He was formerly vice president of the Frisco railroad.

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Lowest Installation Cost. Installation cost is by far the lowest known, being almost negligible. Materials already on the lease are used. Little more tank capacity is required than would be needed for wells producing good oil.

Low Cost of Tret-O-Lite. A single drum of Tret-O-Lite treats 5,000 to 15,000 barrels of fresh cut oil, or 1,000 to 4,000 barrels of tank bottoms.

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Unsaturated Components in Gasoline

Constituents Once Deemed Objectionable in Cracked Gasoline Are Now Recognized as Giving Its Anti-Knock Characteristics

By L. M. Fanning

One of the most important matters as regards the value of cracked gasoline as a motor fuel and particularly applicable to anti-knock characteristics, has to do with unsaturated constituents present in the cracked product. Not so long ago these were considered detrimental. Today they are regarded as giving cracked gasoline its superiority.

The principal objection to the unsaturated hydrocarbons in a marketable gasoline has been on the score of color and odor, the motorists having been educated to demand a white and odorless product. But it has now been determined that drastic chemical treatment which can effectively remove this objection entails the loss of the most valuable constituents. However, proper treating methods will produce the desired results without destroying the qualities so beneficial in a motor fuel. The principal mission of chemical treatment for cracked gasoline is for the removal of diolefins, which it is believed cause trouble by depositing gummy matter in the carburetor, and much progress is being made in work of this nature.

The progress that has been made in refining and treating cracked gasoline insures a product that will not only meet usual specifications but that preserves the constituents giving the motor fuel anti-knock characteristics. It is pointed out that treating cracked gasoline to render it a water white product is an anomaly when it is considered that some refiners and marketers are giving the product special colors in marketing it as a distinctive anti-knock fuel.

The tendency in treating cracked gasoline is toward use of a weak acid which will not destroy as many of the acceptable unsaturated bodies. A representative method is that covered by Ellis, U. S. Patent 1,318,061, which observes that the action of acid is often responsible for discolored products due to the formation of dye stuffs soluble in gasoline. This patent covers the use of dilute sulphuric acid of from 40 to 70 per cent strength. After the usual neutralizing and washing, the result is said to be a stable water white gasoline.

Unsaturated Hydrocarbons

H. S. Bell, in his book "American Petroleum Refining," gives some valuable information on the later views and methods pertaining to unsaturated hydrocarbons.

"Unsaturated hydrocarbons are often the cause of unstable gasoline which goes 'off color' in storage," he says. "Nevertheless, they are now considered by many of our best authorities as among the most valuable constituents of gasoline for motor use. This is particularly true of the unsaturated olefin group. The presence of diolefins is, however, objectionable, not so much on account of color, or even odor, but because of a tarry residue which is deposited after combustion in the motor cylinders. These bodies are also liable to cause trouble by depositing gummy matter in the carburetor. Odor is objectionable to the user, principally because of its unpleasantness. It is not necessarily an indication of poor results in a motor.

"E. W. Dean (Bureau of Mines Technical Paper 214) summarizes the desirable properties of gasoline under the following headings:

1. The gasoline should not contain too large a percentage of highly volatile products, which tend to cause large evaporation losses and excessive danger in handling and storage, but should have enough volatile constituents to permit starting an engine under reasonably unfavorable conditions without preheating.

2. The gasoline should not contain any considerable percentage of heavy or nonvolatile constituents, which, after delivery into the engine cylinders, cannot be completely atomized and burned.

3. The gasoline should not contain material that, after combustion, leaves a residue that collects in the motor.

4. The gasoline should be free from substances that attack metal either before or after combustion. Unremoved acid falls under this heading.

5. Neither the gasoline nor its products of combustion should have a strong or markedly disagreeable odor, since this is objectionable to users of automobiles.

6. The gasoline should be free from noncombustible material, such as water and sediment.

"Mr. Dean makes no reference to color, and the odor specification refers only to 'strong or markedly disagreeable odor,' with the statement that 'this is objectionable to users.' Nevertheless present-day trade demands a water white and sweet smelling product; and unfortunately an appreciable portion of our available motor fuel is destroyed by treatments to satisfy such a demand.

"Color- and odor-imparting bodies are usually removed with sulphuric acid. The amount of acid required varies with the raw stock. Straight run Pennsylvania products can be cleaned up with as little as 1 pound of acid per barrel, while some cracked products require from 5 to 6 pounds.

"The use of strong acid in gasoline treatment, as previously discussed, often destroys many of the valuable constituents."

Olefin Content

Dr. Eugene H. Leslie, in his book, "Motor Fuels, Their Production and Technology," says in part regarding olefin content of gasoline:

"Ten years ago the amount of gasoline produced by cracking processes was so small that the olefin content of gasoline did not need to be considered. Straight-run gasolines contain negligible quantities of olefins. The widespread use of cracking processes demands that the olefin content of gasolines receive more careful consideration. The vapor-phase processes in particular give products that may be most undesirable.

"So far as current knowledge of the properties of olefinic gasolines may be relied upon in forming judgment, it can be said that the mono-olefins are not undesirable as components of gasolines as to preclude the use of gasolines containing them . . . Gasolines that contain mono-olefins in amounts not greater than 10 to 15 per cent are apparently entirely satisfactory in use. Possibly a gasoline composed of 100 per cent mono-olefins would be satisfactory, but it has been noted that these gasolines that contain over 20 per cent of olefins are frequently found to cause trouble by the formation of gummy deposits on the valve stems, valve pockets, and sometimes in the carburetor. These difficulties are probably caused not by the mono-olefins, but by easily oxidized and polymerized diolefins. A benzine that caused the formation of extensive gummy deposits within four hours time in a Maxwell engine, was used with entire satisfaction after it had been refined with a few pounds of sulphuric acid per barrel, washed with dilute caustic soda solution, and steam distilled.

"One difficulty in framing specifications to cover the olefin content of gasolines lies in the lack of suitable analytical methods for determining the percentage of these compounds in the product. At present there is no quantitative method for determining olefins. Possibly such a method is not required, but one is needed that will measure the content of undesirable olefin components.

"Until our knowledge of the chemistry of the olefins and of their values as engine fuels is much more extensive than at present, it will be unwise to draw rigid specifications covering the allowable content of these compounds of gasoline."

Cracked Gasoline

Roland B. Day, in his paper on "Cracking Processes," contained in David T. Day's "Handbook of the Petroleum Industry," says:

"There is considerable prejudice in the minds of many refiners and of the public in general against cracked gasoline, but this prejudice is not justified in view of results obtained. The percentage of unsaturated hydrocarbons contained in cracked gasoline, as a rule, is higher than in gasoline derived from straight distillation. The cracked product often contains as high as 20 to 25 per cent of unsaturated hydrocarbons. The question of the undesirable qualities of such hydrocarbons is debatable, there being no objectionable features about them except color and odor, difficulties that are readily eliminated by the use of ordinary refining methods and should not be considered a feature of great importance in the production of cracked gasoline on a commercial scale.

"The claim has often been made that crude cracked gasoline contains substances which polymerize into gummy substances objectionable in a carburetor. There is probably some basis for this claim, but these substances are easily removed by sulphuric acid. It is claimed further that even after treatment the yellowish color returns when the gaso-

TWO METHODS MANUFACTURING ROAD OILS AND ASPHALT IN CALIFORNIA

By George W. Reid

The Newport Oil & Refining Co., at Newport Beach, Cal., has designed and constructed the small plant shown in the illustration, Fig. 1—for the purpose of dehydrating, or removing water and a small percentage of distillate—from the asphalt crude as found in the Newport Field. This heavy asphalt crude, of 6 to 12 degrees gravity, seems to surround and inclose the water, forming a case around it, which must be punctured or be destroyed by heat before the water can be liberated and the oil made fit for its various commercial uses. When the crude oil is cooled to a thick, stiff, sticky mass, before refining, and handfuls taken of it—water can be squeezed out of it in comparatively large quantities. Asphalt for road purposes, and this field supplies a great deal of road oil, must be free of water and light distillate. The amount of water found in the asphalt varies, of course, with each well and conditions as found by drilling. The refinery pictured only estimates the water recovery from its operations—and that at about half the volume or percentage of the distillate yield. It is stated that this type of apparatus and construction for dehydration is comparatively new on a small scale. It is novel, in that the plant by-passes its storage 90 per cent of the time and loads its product direct to the tank car, hot, just as it comes from the interchanger.

The plant consists of a 2-inch pipe still, 14 feet long, fired through a Dutch oven. The cool asphalt is forced through the pipe still by pump pressure, the pressure usually running 45 to 50 pounds. The still is fired at about 450 degrees Fahrenheit, which is sufficient for complete vaporization of all the distillate and water. Leaving the still the vapors and oil are sprayed into the top of the separator, or "blow tank." Here the heavy hot asphalt settles out and is pumped off through the exchanger to the loading rack. The vapors are led to the condenser box as shown in the illustration. The distillate and water, after condensation, are collected in the open tank shown to the extreme right of the picture. This tank serves as a separator—the water settles to the bottom and is drawn off. The oil level is controlled by an overflow line leading to another tank, placed just to the left of the separator tank. The distillate is collected here for further use. This distillate is dark green in color, has a distinct asphalt odor, and constitutes a recovery or yield of approximately 10 per cent of the crude run. As it is estimated that about one-half as much water is distilled as distillate, then the total percentage distilled is 15 per cent, leaving 85 per cent recovery of asphalt road material. The distillate

(Continued on Page 144)

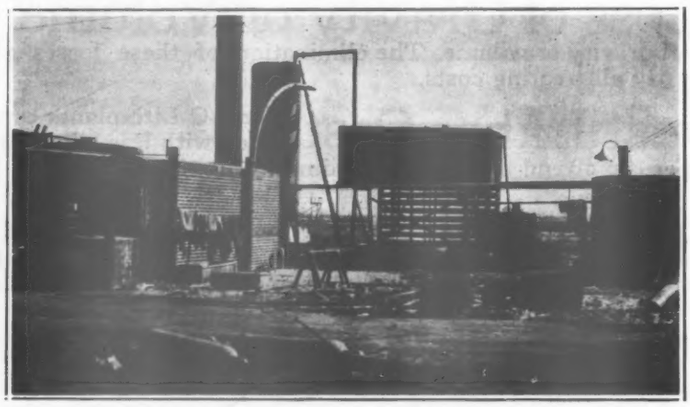

Fig. 1.—Dehydrating Plant of the Newport Oil & Refining Co.

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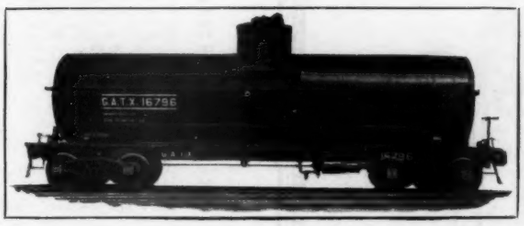

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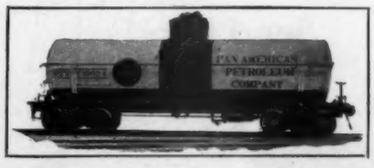

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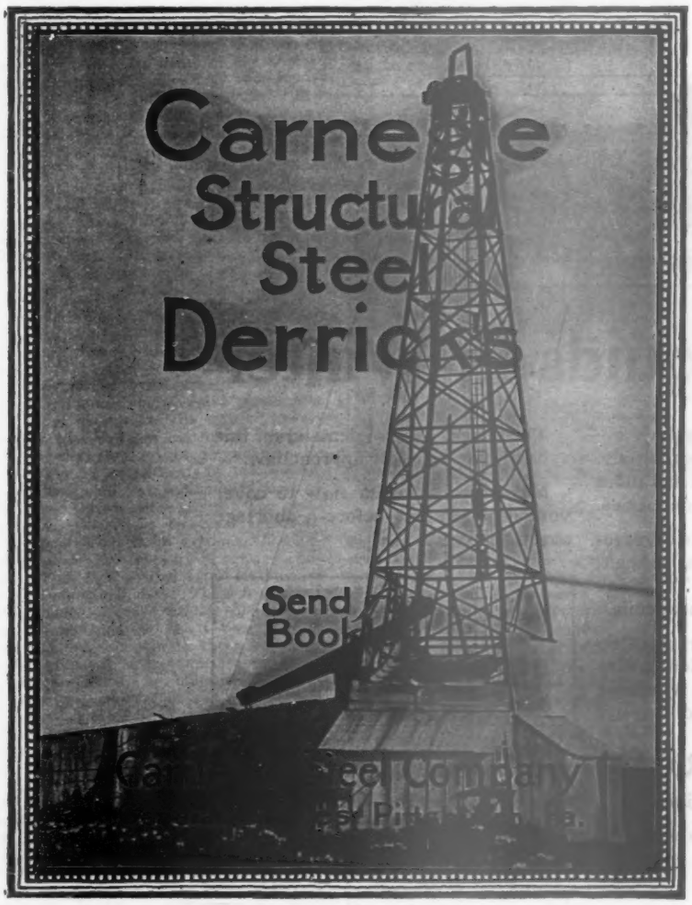

line is allowed to stand in storage. This is not so if the treatment with sulphuric acid has been thorough. The time element in the treatment of gasoline has as much to do with the resultant product as the percentage of acid used.

"It is possible to clear up the average cracked gasoline entirely with 1 or 2 per cent of sulphuric acid if sufficient time is given. Redistillation with steam, as with many of the natural gasolines, is necessary.

"As a motor fuel, cracked gasoline is considered by many writers on the subject to be superior to the natural product, in that it burns longer and delivers power during the entire stroke of the piston, whereas natural gasoline explodes more quickly. Moreover, a smaller quantity of cracked gasoline is required for the same mileage."

Mexican Shipments Show 31 Per Cent Drop From Year Ago

TAMPICO, Mex., Dec. 4.—Shipments of petroleum from Mexican ports of primary clearance during the month of October totaled 6,593,749 bbls., a decrease from the September movement of 212,209 bbls. When compared with shipments in October one year ago the decrease is 3,088,014 bbls. There was no special feature in the movement last month with the possible exception of noting that the movement was entirely an export one, no oil having been dispatched coastwise during the month.

The heavier oils of the northern fields in the shipments noted totaled 5,142,798 bbls.

The movement in detail follows:

FROM TAMPICO

By Transcontinental Petroleum Co.

Oct.	Rig	Vessel, Destination—	Bbls.
1	Ss.	Clement Smith, New York.	68,370
1	Ss.	Hugoton, Charleston	68,567
2	Ss.	Dora C., Baytown	51,578
2	Ss.	Hoxbar, New York	69,866
2	Ss.	Mary Luckenbach, Charleston	51,088
3	Ss.	Malabar, Baltimore	70,697
4	Ss.	Princeton, Boqueron & Antilla	46,538
4	Ss.	W. C. Teagle, Montreal ...	35,051
6	Ss.	Durango, Baltimore	64,373
6	Ss.	Dillwyn, Baltimore	64,077
7	Ss.	T. H. Wheeler, New York.	42,113
7	Ss.	T. H. Wheeler, New York..	†21,994
9	Ss.	Dora C., Mariel, Cuba	44,040
9	Ss.	Pioneer, Baton Rouge	50,412
10	Ss.	James McGee, Montreal ..	35,536
10	Ss.	Cape Ann, Charleston ...	65,529
10	Ss.	L. J. Drake, Jacksonville..	*55,242
11	Ss.	Mary Luckenbach, Port Tampa	*47 097
13	Ss.	Malacca, Charleston	71,679
15	Ss.	Ardmore, Baltimore	73,684
16	Ss.	Hugoton, Baltimore	67,454
17	Ss.	Halsey, Baltimore	64,325
18	Ss.	Argon, Providence	62,503
19	Ss.	Dora C., Preston & Havana	50,656
19	Ss.	Livingston Roe, Panama ..	*73,670
20	Ss.	Pioneer, Key West	*47,127
21	Ss.	Mary Luckenbach, Charleston	49,314
22	Ss.	Princeton, Baytown	50,615
23	Ss.	L. J. Drake, Charleston...	57,536
24	Ss.	Gedania, New York	87,235
24	Ss.	W. A. Riedemann, New York	72,675
24	Ss.	Muskogee, Baltimore	64,233
25	Ss.	W. A. Riedemann, New York	†26,805
25	Ss.	Dillwyn, New York	39,855
25	Ss.	T. H. Wheeler, Ponce & San Juan	*60,711
26	Ss.	Dillwyn, New York	†28,051
26	Ss.	Cape Cod, New York	66,144
27	Ss.	Cape Ann, New York	61,715
27	Ss.	Hoxbar, Baltimore	69,560
29	Ss.	F-Sulphur 1, Banes, Cuba.	18,250
		Bunker deliveries	100,873
		Total	2,418,448

By Huasteca Petroleum Co.
(Pan American Eastern)

Oct.	Rig	Vessel, Destination—	Bbls.
1	Ss.	F. H. Wickett, Providence.	*74,210
1	Ss.	Meline, New York	*61,133
2	Ss.	Herbert G. Wylie, Galveston	*41,798
4	Ss.	E. L. Doheny, New Orleans	60,180
4	Ss.	Nora, New York	*76,016
7	Ss.	Cerro Azul, New York	*77,095
7	Ss.	Fueloil, Tampa	*13,942
8	Ss.	H. G. Wylie, Panama	*41,960
9	Ss.	F. K. Lane, New Orleans..	†76,151
10	Ss.	Mexoil, Miami	*14,780
10	Ss.	Wm. Green, Santos	*63,966
11	Ss.	Norman Bridge, Jacksonville	*40,237
12	Ss.	Crudeoil, Miami	*14,321
14	Ss.	C. A. Canfield, Boston	*60,374
15	Ss.	P. H. Harwood, New York	*67,918
16	Ss.	G. G. Henry, Galveston ...	*65,409
17	Ss.	C. O. Bennett, Baltimore & Jacksonville	†52,624
18	Ss.	F. K. Lane, New Orleans..	†76,516
18	Ss.	Dean Emery, New York ..	*67,194
19	Ss.	Fueloil, Tampa	*13,784
19	Ss.	C. E. Harwood, Norfolk & New York	†35,176
20	Ss.	Harold Walker, Montevideo & B. Aires	*61,731
20	Ss.	F. H. Wickett, New York..	*75,390

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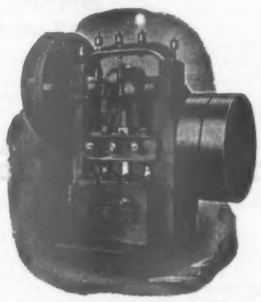

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23	Ss.	G. G. Henry, New York	*63,421
23	Ss.	H. G. Wylie, Providence	*29,766
25	Ss.	Mirlo, Boston	*62,610
26	Ss.	Crudoil, Miami	*13,645
28	Ss.	Norman Bridge, Tampa	*41,523
28	Ss.	Montana, Philadelphia	*62,014
28	Ss.	F. K. Lane, New Orleans	†77,013
30	Ss.	E. L. Doheny, New Orleans	61,884
31	Ss.	Cerro Azul, Rio Janeiro	*62,339
31	Ss.	Cerro Azul, Rio Janeiro	†8,010
		Bunker deliveries	131,392
		Total	2,061,540

By Mexican Eagle Oil Co., Ltd.

Oct.	Rig	Vessel, Destination—	Bbls.
3	Ss.	San Gerardo, Nassau f/o	*79,160
6	Ss.	Kassala, Argentine	†30,385
8	Ss.	San Zotico, Key West	*62,006
14	Ss.	San Ubaldo, Nassau f/o	*58,713
19	Ss.	San Zeferino, Nassau f/o	*56,378
19	Ss.	San Leopoldo, Rio Janeiro	*24,938
19	Ss.	San Leopoldo, Rio Janeiro	†28,791
19	Ss.	San Florentino, Nassau f/o	*81,470
24	Ss.	San Lamberto, Havana	*54,501
28	Ss.	Maindy Manor, Brazil	†35,714
		Bunker deliveries	40,514
		Total	542,570

By Mexican Sinclair Pet. Corp.

Oct.	Rig	Vessel, Destination—	Bbls.
1	Ss.	Harry Farnum, Puerto Barrios, C. A.	29,354
4	Ss.	Sunoil, Boston	63,796
4	Ss.	E. V. R. Thayer, New Orleans (top off)	8,062
9	Ss.	E. W. Sinclair, Matanzas	43,369
11	Ss.	Mirita, Nuevitas	63,473
12	Ss.	W. L. Connelly, New Orleans	30,301
14	Ss.	Gene Crawley, Cienfuegos	37,938
21	Ss.	E. W. Sinclair, New Orleans	42,124
23	Ss.	Harry Farnum, New Orleans	29,314
25	Ss.	Mirita, Cienfuegos	52,053
27	Ss.	Gene Crawley, Nuevitas	29,084
29	Ss.	W. L. Connelly, Nuevitas	30,011
31	Ss.	A. E. Watts, New Orleans	66,177
		Bunker deliveries	31,736
		Total	535,791

By East Coast Oil Co.

Oct.	Rig	Vessel, Destination—	Bbls.
1	Ss.	F-Sulphur 6, Freeport	27,669
3	Ss.	F-Sulphur 1, Freeport	19,119
6	Ss.	Tamiahua, New Orleans	73,128
7	Ss.	F-Sulphur 6, Freeport	27,601
8	Ss.	F-Sulphur 1, Freeport	18,948
14	Ss.	F-Sulphur 6, Freeport	27,561
16	Ss.	Tamiahua, Galveston	73,074
24	Ss.	Tamiahua, New Orleans	69,154
29	Ss.	F-Sulphur 6, Freeport	18,884
		Bunker deliveries	4,791
		Total	359,929

By Mexican Gulf Oil Co.

Oct.	Rig	Vessel, Destination—	Bbls.
4	Ss.	E. V. R. Thayer, New Orleans	62,398
25	Ss.	Virginia, Port Arthur	54,197
28	Ss.	Meline, Brunswick	58,499
		Total	175,094

By Cia. Mexicana-Holandesa La Corona, S.A.

Oct.	Rig	Vessel, Destination—	Bbls.
9	Ss.	Wm. Isom, Baltimore	*52,184
16	Ss.	El Oso, Bahamas f/o	57,586
30	Ss.	Belridge, United States	62,391
		Bunker deliveries	26,487
		Total	168,648

By Panuco Boston Oil Co.

Oct.	Rig	Vessel, Destination—	Bbls.
13	Ss.	F. R. Kellogg, Philadelphia	62,547
		Bunker deliveries	2,242
		Total	64,789

By The Texas Co.

Oct.	Rig	Vessel, Destination—	Bbls.
8	Ss.	Pennsylvania, Port Arthur	62,375
18	Ss.	Pennsylvania, Providence & Marcus Hook	*54,851
		Bunker deliveries	4,787
		Total	122,013

By Mexican Atlas Oil Corp.

Oct.	Rig	Vessel, Destination—	Bbls.
24	Ss.	Nelson, New York	37,733
		Bunker deliveries	3,652
		Total	41,385

By Mexican Oil Exporters Corp.

Oct.	Rig	Vessel, Destination—	Bbls.
3	Ss.	Nelson, New York	37,367
		Bunker deliveries	3,574
		Total	40,941

FROM TUXPAM

By Mexican Eagle Oil Co., Ltd.

Oct.	Rig	Vessel, Destination—	Bbls.
4	Ss.	San Gerardo, Nassau f/o	*29,130
	Ss.	San Florentino, Nassau f/o	*32,801
		Bunker deliveries	670
		Total	62,601

OCTOBER SUMMARY

From—	
Tampico	6,531,148
Tuxpam	62,601
Total October, 1925	6,593,749
Total October, 1924	9,681,763
Decrease October, 1925	3,088,014

DIVISION OF MOVEMENT

To—	
United States	4,767,435
Cuba and West Indies	844,151
South America	315,874
Canada	170,587
Panama	115,630
Central America	29,254
Bunkers (to balance)	350,718
Total	6,593,749

CLASSES

Crudes	5,455,412
Topped crudes	2,290,289
Distillates	497,230
Bunkers (to balance)	350,718
Total	6,593,749

*Denotes topped crude.
†Denotes distillates.

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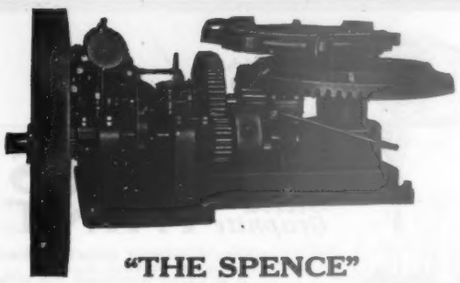

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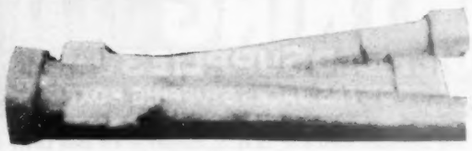

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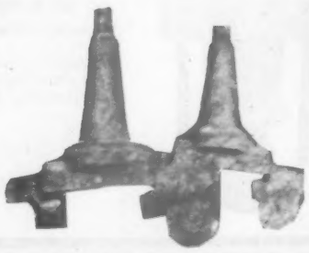

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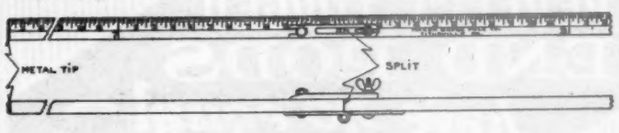

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Cold Air From Well Gives All Power On Snyder, Texas, Lease

SNYDER, Tex., Dec. 6. — Cold air performs all the work on the Northwest Co.'s lease in the Snyder Field, from furnishing power for drilling or pumping wells to tasks of an almost domestic nature.

The air comes from the discovery well on the lease. Considerable attention was attracted by its discovery and its employment in the place of steam in finishing the discovery well a couple of years ago. Since that time, however, it has been thoroughly trained and much more versatile and is put to a score of tasks.

Besides drilling five wells, it is now pumping four producers with a total output of 85 bbls. of oil per day. One of these is 3,420 feet deep and the others are producing from 1,850 feet. But this is only a part of the many tasks demanded. It furnishes the electric lights for the lease, flows the water wells, operates compressed air machines, pumps up automobile tires and performs a score of other tasks.

By reason of its coolness it is used in summer time to provide ice water, or to freeze a watermelon when the workmen on the lease indulge in such edibles.

It is not recorded whether it has made ice cream or not, but the making would be but a simple task. When one stands before the exhaust pipe it feels as an electric fan.

All this it does entirely without cost or remuneration. The "cool air" is a gas flow, found in a lime at 1,296 feet, which analyzes 93 per cent nitrogen, an entirely noninflammable and inert gas. The gas also shows a trace of helium, but not enough to make it useful for extraction.

Useless for its helium content, or for burning, as discovery it appeared about as nearly valueless a discovery as could be imagined. However, it had a 200-pound rock pressure, and this was put to account. The gas was bradenheaded and turned into the boilers to be used instead of steam.

A boiler half filled with crude oil, to arrest sand or other particles which might come from the well, and an equalizer and blow-off valve on the gas line from the well, and the apparatus was arranged.

A 120-pound pressure can be quickly built up, and it turns the engines quite as well, if not better, than steam.

In fact, the cylinder head of one engine in constant use for two years and a half has not once been off. The only adjustment made was to use oil suitable for ice machines, for the expansion of the gas in the cylinders and the exhaust pipe produces a cooling much like that of ammonia in ice factories. That explains the cooling of the water and other edibles and drinkables placed near the exhaust pipe.

For this reason the exhaust pipes are always frost-coated, as are ammonia pipes in an ice factory. One of the wells drilled and pumped is over 4 miles from the well furnishing the gas. It was drilled to 3,420 feet with no power cost, and with a requirement of only 1,000 bbls. of water, where steam would have required 25 times that amount.

The cheapness of the power is largely responsible for the economic success of the property, which has wells of but small production. Such a small amount of gas is used that nearly three years has not shown a fraction of a pound of reduced pressure.

The use of the gas was planned and executed by Walter W. Lechner, Texas A. and M. graduate, who is superintendent of the lease. The Northwest Co. has about 8,000 acres in the Ira territory, and seems to have a corner on this gas. Neighbor operators have sought it, but have not found it.

TO HEAD BRITISH CONCERN

Lord Buckmaster, former Lord Chancellor, the London Daily Express says,

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is to be offered the chairmanship of British Controlled Oilfields, Ltd., in succession to Sir Edward Mackay Edgar. The company owns vast concessions in many parts of South America.

DRY HOLE PLUGGERS IN OKLAHOMA IDENTIFIED

Frequent inquiries for the names and addresses of Oklahoma conservation officers and districts prompted the listing of those officers. Their names, addresses, telephone numbers and districts are as follows:

Frank Allen—Pottawatomie, Seminole and Pontotoc. Hughes Coal Co., Box 202, Holdenville, Okla. Phone 468.

John Benton — Stephens, Jefferson, Grady, Canadian County south of Township 13, Caddo, Comanche, Cotton, Tillman, Kiowa, Washita, Custer south of Township 13, Roger Mills south of Township 13, Beckham, Greer, Harmon and Jackson. Box 334, Duncan, Okla. Phone 400, care H. Baker.

Eugene Hagan—Lincoln, Creek, Payne, Pawnee and Tulsa. 506 Security National Bank Bldg., Tulsa, Okla. Phone 6892 office. 3-4763 residence.

J. W. Ryan—Okmulgee and Okfuskee. Phone 3805, P. O. Box 1054, Okmulgee, Okla.

Miller D. Hay—Rogers County south of Township 23, Wagoner, Cherokee and Adair Counties south of Township 18, Muskogee, Sequoyah, Haskell, Pittsburg east of Range 14, Latimer and LeFlore south as far as Township 1 North. 2114 Court Street, Muskogee, Okla. Phone 4012.

J. A. Kendall—Kay, Noble, Grant, Garfield, Alfalfa, Woods, Major, Harper, Beaver, Woodward and Ellis Counties. Ponca City, Okla. Box 51.

L. D. Looney—Washington, Nowata, Craig, Ottawa, Rogers as far south as Township 22, Mays, Delaware, Cherokee and Adair north of Township 18. 226 South Cedar Street, Nowata, Okla. Phone 107.

B. E. Mobley—Garvin, Murray, Carter, Love, Johnston, Marshall, Atoka, Bryan, Pushmataha, Choctaw, LeFlore south of Range 2 North and McCurtain. 903 North Washington Street, Ardmore, Okla. Box 425. Phone 409.

J. W. Ryan—All of Okfuskee excepting Townships 11 and 12, Range 11. Box 1661, Holdenville, Okla. Phone 215.

Oklahoma City Office—Roger Mills and Custer Counties as far south as Township 12; Dewey, Blaine, Kingfisher, Canadian as far south as Township 12, Logan, Oklahoma, Cleveland and McClain.

TEST WITH LIGNITE ON I. & G. N. LOCOMOTIVES

HOUSTON, Tex., Dec. 7.—Officials of the motive power department of the International and Great Northern Railroad, a part of the Missouri Pacific system, are experimenting with lignite as a fuel for locomotives.

The experiments are being made on the Houston-Palestine division with specially equipped engines, with C. C. Shaw, superintendent of the fuel department, in charge. The locomotives are now steamed with fuel oil, most of which is received from north Louisiana refineries. Contracts can only be made for a six months' period and prices varied with the renewal of each contract.

The railroad officials say the lack of stability in prices, with the uncertainty of sufficient supply, is unsatisfactory. Lignite is common in Texas, but coal is scarce and of inferior quality. A number of lignite deposits are being mined along the lines of the I. & G. N., which the officials say can be mined and delivered on the locomotives for an average of 50 cents per ton.

Two freight locomotives have been equipped with specially constructed stokers and grate bars and these are being used for experimental purposes. The railroad officials say the progress is satisfactory and believe they will soon be using lignite on all freight engines on the division between Houston and Palestine.

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Like all other Myers Products, Myers Self-Oiling Bulldozer Power Pumps stand the acid test from a sales and profit standpoint just as they do from a service standpoint. Fashioned and built on fifty years of pump building experience, their qualities in both design and construction as well as those of their many exclusive improvements assure lasting satisfaction. Twelve sizes for shallow service—five sizes for deep service—capacities up to ten thousand gallons per hour—twenty-four hour operation, day in and day out, without care or attention. Your inquiry is solicited.
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ASHLAND PUMP AND HAY TOOL WORKS

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OIL FIELD SPECIALTIES
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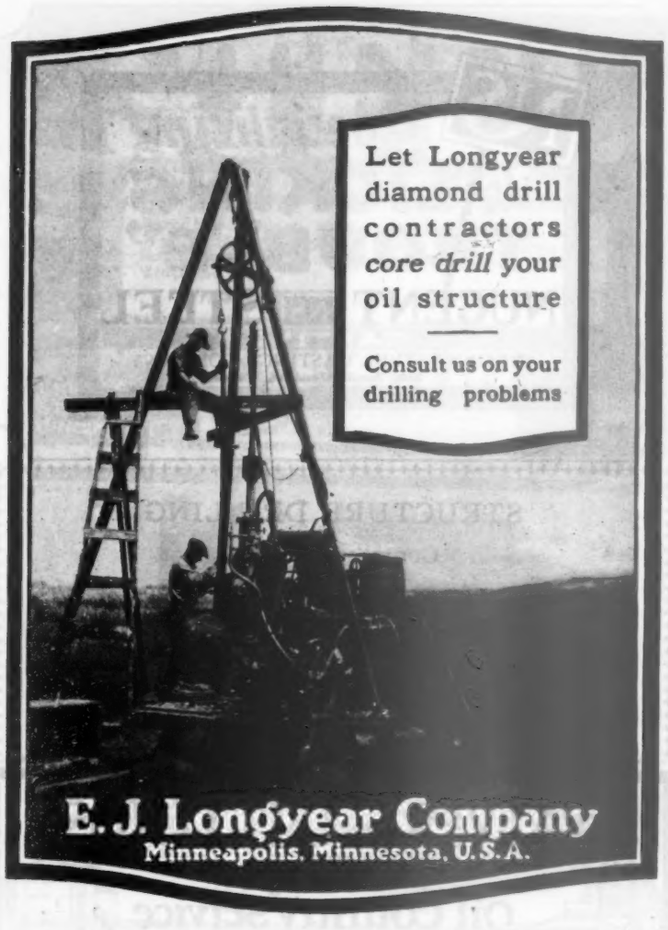
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Eleven years in use and no repair parts necessary on any O'Brien derricks. They will drill your wells and pull the pipe. Will not deteriorate, your salvage will be 100% twenty-five years hence. Your wells are your bank, why not put the best structure over them you can get.

O'Brien Steel Construction Company
Washington, Penna.
Rig Equipment Company, Sand Springs, Okla.

MANUFACTURING ROAD OILS AND ASPHALT

(Continued from Page 138)

yield is consumed under the pipe still and boilers.

Similar to Smackover

This installation bears similarity in purpose and methods to certain dehydrating plants constructed in the Smackover Field of southern Arkansas. The difference, of course, lies in the fact that Smackover heavy production contained sand as well as water, yielded some naphtha, and was prepared for fuel oil consumption. The asphalt production in this field is refined for the removal of water and distillate and then used as road oil. There is much similarity, however, in the construction and design of the fuel oil and road oil dehydrating plants.

Continuous Reduction Plant

Another feature of interest to heavy oil refiners is the comparatively newly patented and perfected process for the continuous reduction of asphalt crude. This process is shown in Figure 2. The

Fig. 2.—Asphalt Plant for Continuous Reduction.

plant, at Newport Beach, is operated by The Continental Development & Reduction Corp. J. D. Fields is patentee.

Asphalt crude is usually refined by skimming off the lighter cuts, then reducing the bottoms to the hardness or consistency required by the specifications by batch methods. There are numerous processes in operation for the removal of the asphalt from the stills after reduction is completed.

This process had as its aim the distillation of light oils or constituents, and the reduction of the remaining asphalt, in one operation—embracing the continuous removal of the finished asphalt from the rear of the still, while the still is receiving a continuous fresh charge of oil at the front.

The still is cylindrical and horizontal and equipped with a spiral paddle-like arrangement which revolves within the still shell. This equipment forces the asphalt toward the rear of the still for discharging. As an aid to the paddle spiral, steel balls are continuously forced into the front of the still. They then are forced toward the rear by the paddles carrying along the reduced asphaltum. As the steel balls and asphalt are removed from the rear of the still the balls are separated from the asphalt and returned again to the front of the still by a mechanical conveyor.

The vapors leave the top of the still and are conveyed to two towers. One is employed as a separator, the other as a fractionating column. The system is a nonpressure process and the usual features of overhead and recovery are said to be in line with current practice. Some little difficulty was encountered in attaining the speed or capacity for which the installation was designed, but this difficulty is being overcome. The process is patented.

"Give It a Try"

THEY decided to "Give It a Try" and paid us $6.60 to insert their six-line advertisement in the Classified Section for one month.

Before the second appearance of their little advertisement they had received many orders. One was a $300 order—plus a promise of all future business.

It Certainly Paid Them to "Give It a Try"

We are glad of it as it is our desire to help everyone who wants to do business with the Petroleum Industry.

The Classified Section provides an excellent way of introducing you or your organization to the great Industry at a most reasonable cost.

However, cost is the least consideration. Results are what count. That's why The Oil and Gas Journal has the greatest Petroleum Classified Section in America.

Mail your advertisement today.

It will pay you to "Give It a Try"

Classified Wants Section

"Biggest in America"

Detailed Operations in Western Fields for November

SUMMARY OF ALL FIELDS

Field—	Comp.	Prod.	Dry	Gas
Eastern	384	1,471	62	84
Lima	45	445	7	6
Central Ohio	52	426	9	36
Indiana	14	165	2	1
Illinois	26	2,377	6	1
Kentucky	121	1,254	27	16
Tennessee	5	200	3	0
Kansas	192	14,114	53	11
Oklahoma	345	81,874	134	33
North Central Texas	315	22,810	126	11
East Central Texas	30	112	26	1
Southwest Texas	50	4,262	13	7
Gulf Coast	90	38,180	30	0
North Louisiana	30	1,650	7	4
Arkansas	74	6,940	26	15
Wyoming	58	6,208	7	3
Montana	48	8,742	18	2
Colorado	5	1,050	1	1
Utah	0	0	0	0
New Mexico	35	2,862	7	0
Total Nov.	1,899	195,232	564	232
Total Oct.	2,129	188,618	573	205
Difference	230	6,614	9	27

Rigs and Wells Drilling

Field—	Rigs	Drg.	Ttl.
Eastern	138	469	607
Lima	4	55	59
Central Ohio	21	66	87
Indiana	1	31	32
Illinois	2	53	55
Kentucky	10	249	259
Tennessee	3	15	18
Mississippi	3	11	14
Alabama	0	6	6
Georgia	1	4	5
Kansas	93	339	432
Oklahoma	222	1,031	1,253
North Central Texas	59	407	466
East Central Texas	2	28	30
Southwest Texas	47	91	138
Gulf Coast	44	164	208
North Louisiana	30	44	74
Arkansas	43	127	170
Wyoming	38	275	313
Montana	22	152	174
Colorado	17	94	111
Utah	2	32	34
New Mexico	5	135	140
Total Nov.	807	3,878	4,685
Total Oct.	815	4,052	4,867
Difference	8	174	182

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. The rigs and wells drilling are set forth in similar manner. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Osage	52	2,945	18	6
Tulsa	39	231	17	3
Okmulgee	37	3,870	15	3
Seminole	18	165	4	0
Okfuskee	12	592	8	1
Hughes	14	227	5	4
Muskogee and Wagoner	8	35	5	1
Creek	31	1,587	10	4
Pawnee	12	379	4	0
Kay	17	5,971	6	3
Payne and Lincoln	20	7,800	2	0
Noble	10	66	9	0
Garfield	16	54,336	1	0
Stephens and Cotton	19	791	8	2
Carter	18	672	8	1
Miscellaneous	52	2,207	19	5
Total Nov.	345	81,874	134	33
Total Oct.	433	69,664	142	46
Difference	88	12,210	8	13

Summary of Rigs and Wells Drilling

County—	Rigs	Drg.	Ttl.
Osage	15	57	72
Tulsa	2	25	27
Okmulgee	29	83	112
Seminole	6	47	53
Okfuskee	10	63	73
Hughes	19	48	67
Muskogee and Wagoner	3	17	20
Creek	35	84	119
Pawnee	8	45	53
Kay	16	128	144
Payne	9	37	46
Lincoln	11	65	76
Garfield	11	76	87
Noble	2	25	27
Grady	7	20	27
Stephens and Cotton	8	44	52
Pontotoc and Garvin	2	22	24
Carter	10	39	49
Jefferson	1	26	27
Miscellaneous	18	80	98
Total Nov.	222	1,031	1,253
Total Oct.	213	1,023	1,236
Difference	9	8	17

WELLS COMPLETED

OSAGE COUNTY

29-29-10 I. T. I. Oil 334 ..... gas
21-29-11 Winona Oil 1 10
26-27-5e Mid-Kansas Oil 9 160
8-27-6e P. & R. Corp. and Comar Oil 1 1460
21-26-8e The Texas Co. 1 ..... dry
3-26-11 Knupp & Phillips Pet. 1 20
29-25-8e The Texas Co. 4 40
31-23-8e Atlantic O. P. Co. 1 5
11-21-10 Mid-Kansas Oil 3 50
19-21-12 Kewanee Oil 5 60
33-29-9e L. C. Hivick 1 ..... dry
17-28-11 Winona Oil 1 ..... dry
21-29-11 Winona Oil 1 ..... dry
36-28-10 Owen Osage Oil 350 ..... dry
3-28-11 I. T. I. Oil 1 5
19-25-8e Wrightsman et al 5 65
4-25-9e Petroleum Drlg. Co. 13 ..... dry
1-25-11 Robinson et al 5 ..... dry
34-25-11 Devonian Oil 14 40
32-24-8e Continental Oil 5 46
29-24-12 Owen Osage Oil 346 ..... dry
7-23-11 Owen Osage Oil 351 ..... gas
2-22-9e Redecker 1 ..... dry
33-22-10 Tidal Osage 22 12
28-22-12 Knupp et al 1 25
25-21-9e Devonian Oil 1 25
10-21-10 Devonian Oil 3 ..... dry
19-21-10 Sand Springs Home Oil 88 ..... dry
16-21-12 Selby O. & G. 14 6
19-21-12 Kewanee Oil 6 45
30-21-12 Elliott & Smith 21 50
35-29-11 Osage Dev. Co. 46 50
8-27-11 Owen Osage Oil 352 ..... gas
21-26-6e Lewis Oil 14 312
30-24-8e Sam Boorstein 1 45
28-24-10 Winona Oil 17 40
12-23-8e Peters Pet. 6 80
33-20-10 T. J. O'Reilly 1 20
29-20-11 Sand Springs Home Oil 3 50
15-29-10 I. T. I. Oil 1 50
28-28-11 Owen Osage Oil 353 ..... gas
27-25-11 I. T. I. Oil 336 ..... gas
25-24-8e Tidal Osage Oil 12 48
32-24-9e Peters Pet. 6 10
7-24-11 Taelos et al 1 10
14-23-8e Twin State Oil 1 ..... dry
1-21-8e I. T. I. Oil 7 35
23-21-8e Mason & Carter Bros. 6 10
11-21-10 Oklahoma Nat. Gas 695 ..... gas
14-21-10 Gyphy Oil 1 ..... dry
15-21-12 Titus et al 3 20
22-21-12 Titus & Norris 1 45

Wells completed 52
Production 2945
Dry 13
Gas 6
Gas production 21,250,000

TULSA COUNTY

34-19-11 Inchoe, Riverland Oil 6 50
Winemiller, Wilkerson et al 1 .. dry
29-19-12 Unallotted, Mutual Oil 3 10
3-19-11 Leverett, S. Springs Home Oil 1 dry
13-19-11 Durant, S. Springs Home Oil 1 dry
29-19-11 Cato, Cato Oil 5 ..... dry
2-17-14 Childers, Green et al 1-A ..... dry
11-16-13 Brown, W. O. Dickerson 2 ..... dry
4-19-10 Lindsey, Steele et al 1 ..... dry
29-19-12 Postoak, Wilson 7 40
Unallotted, Brooks Drlg. Co. 3. 20
24-18-13 Chisholm, Green et al 3 ..... dry
14-18-14 Atkins, Mays Bros. 1 ..... dry
16-16-14 Mason, Burke et al 2-A 40
34-19-12 Templin, Suppees et al 1-A .. gas
8-18-13 Fisher, Posey Short 1 ..... dry
30-18-14 Perryman, F. A. Best 1-A ..... dry
33-20-14 Sampson & Wagner, J. F. Maiers 1 6
7-22-14 Kelmer, Lenard & J. Zoller 1. 20
29-22-14 Churchyard, Tiffany et al 1 ... dry
1-22-13 Ross, C. W. Hawke et al 1 ... dry
29-22-14 Churchyard, Tiffany et al 1 ... 20
De Armond, Taylor, Parker et al 1 ..... dry
17-22-14 Evans, Enfisco-Oil 2 ..... gas
30-22-14 McDonald, J. H. Middleton 1 .. 25
11-20-12 Moore, Central Pet. 3 ..... gas
10-20-12 ——, Gled Oil 2 ..... dry
11-19-12 Tulsa City, McCoy et al 1 ..... dry
11-18-12 Smith, The Prairie O. & G. 3 .. dry

Wells completed 29
Production 231
Dry 17
Gas 3
Gas production 5,700,000

OKMULGEE COUNTY

24-16-12 Tiger, Okla. Nat. Gas 3 65
29-15-11 Getzendamer, Anglo-Tex. Oil 6 . dry
19-15-12 Strip, D. D. Mickelson 2 ..... gas
25-13-11 Kemp, Pure Oil 6 35
4-13-12 Harjo, Kingwood Oil 1 ..... dry
31-12-12 Rentie, Simms Oil 5-A 60
Rentie, Wooster & Mee 4 ..... dry
36-12-13 Bruner, Tulsa Oil 2 300
12-13-13 Gray, Mid-Cont. Pet. 13 100
15-13-14 Doyle, C. H. Lebow 8 50
25-13-14 Scott, W. R. Sommerville 3-A . dry
2-14-14 Starr, E. Price 1 ..... dry
7-15-13 Field, Devonian Oil 5 600
Wisener, Devonian Oil 5 720
11-15-14 Rentie, J. A. Swindler 3 ..... dry
21-15-14 Osborn, J. L. Selby 4 ..... dry
35-15-14 Harris, Hilde 4 ..... dry
22-16-13 Fox, Holmes et al 1 ..... dry
9-15-11 Parks, Transcontinental Oil 4 .. dry
15-15-12 Brown, Denton & Marshall 1 .. dry
17-14-11 Hance, Sheldon-Houston Oil 1 . dry
6-14-12 Cover, Waite Phillips 2 ..... dry
1-11-13 Blackwell, Pulaski Oil 6 245
20-16-12 Doneghy, Sheldon-Houston Oil 1 25
14-15-12 Hogan, Olean Pet. 8 165
8-13-12 Graves, H. C. Marcy et al 6 ... 35
20-13-12 Newhouse, Continental Oil 4 ... 25
1-11-13 Thomas, Magnolia Pet. 9 275
15-13-14 Reynolds, Roxana Pet. 8 100
7-15-13 Field, Devonian Oil 4 300
14-15-12 Culp, Page Bros. Oil 4 ..... dry
35-14-11 Gill, Tiger Min. & Preston 1 .. 15
7-13-12 Jackson, Detrick et al 1 ..... dry
32-13-12 Unallotted, Eagle Picher & Mid-Cont. 2 ..... gas
25-13-14 Doneghy, W. R. Sommerville 1-A ..... gas
7-15-13 Field, Devonian Oil 5 275
Wisner, Devonian Oil 9 480

Wells completed 37
Production 3870
Dry 15
Gas 3
Gas production 20,000,000

SEMINOLE COUNTY

5-10-8e Baker, Tidal Osage Oil 3 12
15-9n-6e Noble, Superior Oil 1 ..... dry
29-8n-8e Joshua, Magnolia Pet. 1 ..... dry
31-8n-8e Willis, Boggs & Sykes 6 ..... dry
14-8n-7e Jackson, T. B. Slick 1 130
30-8n-8e Casey, Magnolia Pet. 1 ..... dry
28-8n-7e Oug, Magnolia Pet. 1 18
32-8n-8e Franz, Magnolia Pet. 3 5

Wells completed 18
Production 165
Dry 4

OKFUSKEE COUNTY

6-11-8e Pierce, Waite Phillips 1 ..... dry
4-12-11 Daniels, Kline & Brann 2 ..... dry
24-11-11 Fields, Phillips Pet. 4 ..... dry
34-10-11 Harjo, Tidal Osage Oil 1 ..... dry
2-10-12 Goober, W. C. Newman 1 ..... gas
33-12-11 Fields, Josey Oil 4 517
25-11-9e Yarhola, Eagle Picher Oil 3 .. dry
15-10-9e Bruner, Kingwood Oil 1 ..... dry
11-10-11 Hill, Lou Umburn 3 ..... dry
33-12-11 Carolina, Independ. O. & G. 2 .. 25
19-11-11 Barnett, Riverland Oil 1 50
21-11-11 Harjo, Savoy Oil 1 ..... dry

Wells completed 12
Production 592
Dry 8
Gas 1
Gas production 19,000,000

HUGHES COUNTY

35-8n-8e Lowe, Gypsy & Houston 2 2
17-8n-10 Carter, Phillips & Robinson 1 gas
1-9n-9e Cain, Waite Phillips 1 120
4-9n-11 Harjo, Mid-Kansas Oil 2 40
19-8n-10 Pickens, W. R. Ramsey 1 ..... gas
10-9n-9e Polk T. B. Slick 1 ..... dry
Polk, T. B. Slick 2 ..... dry
9-9n-11 Lucy, Tidal Osage Oil 2 30
Lucy, Tidal Osage Oil 4 ..... dry
14-9n-9e Bowlegs, Douglas Oil 1 ..... gas
3-9n-11e Moore, Tidal Osage Oil 4 ..... dry
17-8n-9e Carter, Phillips & Robinson 2 . gas
18-8n-10 Irvine, Independent O. & G. 4 .. 35
4-5n-11 McClain, Mathers & Skelly 1 .. dry

Wells completed 14
Production 227
Dry 5
Gas 4
Gas production 95,115,000

MUSKOGEE & WAGONER COUNTIES

35-15-16 Lee, E. A. Hutchinson 7 ..... dry
32-15-19 Price, Buell & Bradley 2 ..... dry
4-13-16 Hawkins, Blakely 1 ..... dry
19-14-16 Barnett, Probst 3 ..... dry
25-17-16 White, Larsarskey 3 25
35-17-16 Lewis, Mitchel 2 ..... gas
21-18-16 Tiger, Eastern Okla. Oil 3 10
9-15-17 Grimmett, Black Jack 1 ..... dry

Wells completed 8
Production 35
Dry 5
Gas 1
Gas production 4,000,000

CREEK COUNTY

32-17-8e Washington, Olean Pet. 5 240
34-17-8e Sewell, C. G. Tibbens 1 ..... gas
16-14-10 Tiger, Atlantic O. P. Co. 1 ..... dry
18-14-10 Dixon, Wilcox O. & G. 1 ..... dry
13-17-8e Sidwell, The Prairie O. & G. 1 . dry
22-17-9e Self "A," The Prairie O. & G. Co. 5 20
5-19-8e Fife, The Texas Co. 1 ..... dry
27-17-8e Alec, Waite Phillips 1 175
5-16-8e Emarthla, Magnolia Pet. 3 60
10-18-10 Parks, Schooley et al 1-A 30
6-18-12 Gray, Gypsy Oil 13 25
19-17-9e Wright, Pure Oil 2 ..... dry
24-17-10 Dawson, J. H. Wright 7 45
32-16-9e Roberts, Buckholtz 1-A 25
14-15-9e Wilson, Nowata O. & R. 1 ..... dry
13-19-8e Peters, Lassen Bros. 3 45
21-16-8e Major, Tidal Oil 1 ..... dry
17-17-11 Wacoche, Shaffer O. & R. 2 240
30-14-8e Kernal, Prairie O. & G. Co. 7 .. 265
36-18-8e Carman, Atlantic O. P. 1 ..... dry
6-18-12 Strip, Gaskey et al 1 ..... gas
Strip, B. E. Kennedy et al 2 .. 100
21-17-9e Harjoche, T. P. C. & O. Co. 3 .. 20
30-17-9e McIntosh, Roland Oil 1 17
36-17-9e Self, Kiyoche Oil 6 25
19-17-10 Dickson, Tidal Oil 2 5
24-17-10 Dawson, J. H. Wright 6 ..... dry
14-16-11 Giles, Beal & Carey 1 ..... dry
31-15-9e Friday, C. G. Tibbens 1 ..... gas
17-14-10 Johnson, Gladys Belle Oil 2 250
6-15-7e Emarthla, Oklahoma Nat. Gas 1 gas

Wells completed 31
Production 1587
Dry 10
Gas 4
Gas production 22,000,000

PAWNEE COUNTY

22-23-4e Zoldoskie, Amerada Pet. 2 100
8-22-5e Feaster, Magnolia Pet. 1 ..... dry
35-21-7e Armstrong, Gypsy & Selby 3 .. 30
9-20-6e Fugate, Magnolia Pet. 1 25
21-20-6e Leaher, Magnolia Pet. 9 12
29-20-6e Canfield, Magnolia Pet. 1 ..... dry
2-20-7e Wolf, Murray et al 2 60
9-20-7e Rule, Noble O. & G. 2 14
27-23-3e Donahue, Magnolia Pet. 1 ..... dry
35-21-7e Armstrong, Selby & Gypsy 2 .. 120
22-20-7e Cowan, Ora Stein 1 ..... dry
9-20-6e Fugate, Magnolia Pet. 2 18

Wells completed 12
Production 379
Dry 4

KAY COUNTY

9-28-1w Hampton, Mealy et al 1 ..... dry
9-27-1w Cumler, Blackwell O. & G. 3 .. gas
16-25-2w School land, Marland Oil 1-A .. 2276
21-25-2w Turk, Carter Oil 3 175
27-25-1w Sutter, McMan Oil 5 ..... dry
35-25-1w Endicott, Comar Oil 3-W ..... dry
Endicott, T. B. Slick 4 ..... dry
31-27-2e Harris, Twin State Oil 1 77
27-25-1w Davis, The Texas Co. 13 168
1-26-2w Smith "A," Prairie O. & G. 7 .. 30
8-27-1w Mastiff, J. M. Miller et al 1 .. dry
10-27-1w Moore, Black Gold Oil 1 ..... gas
16-27-1w Barr, Anolu Oil 2 ..... gas
15-25-2w Thomas, Marland Oil 3 3140
Thomas, Carter Oil 1 ..... dry
16-25-2w School land, Marland Oil 1 88
35-25-1w Ogg, Comar Oil 1-W 17

Wells completed 17
Production 5971
Dry 6
Gas 3
Gas production 104,000,000

PAYNE & LINCOLN COUNTIES

11-18-5e Laughlin, Wheeler, High et al 1 dry
2-14-5e Tipton, The Texas Co. 5 1100
3-14-5e Sukovaty, Magnolia Pet. 5 660
17-19-5e Boyd, The Taxas Co. 1 45
6-15-6e Earp, Carter Oil 1 860
Earp, Independent O. & G. 1. 70
2-14-5e Tipton, The Texas Co. 6 1095
Bigwater, Twin State Oil 5 430
3-14-5e Bagwell, Selby & Southwestern Oil 8 280
23-18-3e Haley, Mulberry Oil 1 1050
Haley, Mulberry Oil 2 370
2-14-5e Bigwater, Twin State Oil 6 675
36-19-5e Laughlin, Josey Oil 6 180
6-17-4e Kaufman, Skelly Oil 1 25
34-15-5e Sproleder, Magnolia Pet. 4 250
13-15-6e Bowers, Mid-Cont. Pet. 1 ..... dry
2-14-5e Hopkins, Galvez Oil 1 1140
Hopkins, Skelly Oil 1 540
3-14-5e Sproleder, Magnolia Pet. 2 120
15-14-6e De Lasier, Wilcox O. & G. 2 10

Wells completed 20
Production 7800
Dry 2

NOBLE COUNTY

2-24-1w Blubaugh "C, Comar Oil 3-W 66
Blubaugh "C," Comar Oil 4-W .. dry
Gaume, Comar Oil 4-W ..... dry
Gaume, Comar Oil 15-W ..... dry
3-24-1w Pettit, Comar Oil 5-W ..... dry
Pettit, Comar Oil 17-W ..... dry
Pettit, Comar Oil 19-W ..... dry
9-24-1w Crober, John Herron 1 ..... dry
21-24-1w Birch, Champlin Ref. 1 ..... dry
14-23-2w Snyder, Mid Co. Pet. Co. 4½ .. dry

Wells completed 10
Production 66
Dry 9

GARFIELD COUNTY

36-22-4w Ed Austin, Sinclair Oil 5 55
18-22-3w Schroeder, Roxana Pet. 26 385
30-22-3w Campbell, Sinclair Oil 20 90
18-22-3w Schroeder, Roxana Pet. 3-W .. 7935
Schroeder, Roxana Pet. 5-W .. 7033
Shaffer, Sinclair Oil 9 1
25-22-4w Windler, Sinclair Oil 15 45
18-22-3w Hartley, Sinclair Oil 23 24
19-22-3w Kisner (West), Sinclair Oil 31 2423
31-22-3w McLean, Imo Oil 4 ..... dry
13-22-4w School land, Cosden & Marland 53 8217
School land, Cosden & Marland 54 4500
Walker, Sinclair Oil 23 4652
Walker, Sinclair Oil 25 200
34-22-4w Belveal, Sinclair Oil 27 3000
18-22-3w Hartley, Sinclair Oil 19 15766

Wells completed 16
Production 54336
Dry 1

STEPHENS & COTTON COUNTIES

2-2n-5w Simms, Carter-Knox 2 10
31-1n-8w Brymer, Smith-Law 2 ..... dry
Brymer, Smith-Law 3 ..... dry
12-1n-5w Shortes, Shaner Drlg. Co. 1 .. dry
32-1s-8w Shelton, Lorraine Pet. 8 35
Potts, Western Oil Corp. 1 ..... dry
34-1s-5w Ziegler, Magnolia Pet. 16 40
12-2s-8w Fobb, Commercial Pet. 1-C .. 50
32-1s-8w Blaydes, Carter Oil 9 40
28-1n-9w Bolton, Douthitt et al 2 ..... gas
25-1n-9w Hines, Ka Wye Drlg. Co. 1 .. 60
26-1n-9w Brown, Eagle Creek Oil 2 ..... gas
33-1s-8w Glass, Hamon et al 6 ..... dry
5-2s-8w Forgay, Carter Oil 3 5
10-2s-8w Hilder, Muse & Pace 1 ..... dry
11-2s-8w Parker, Magnolia Pet. 1 ..... dry
12-2s-8w Fobb, Commercial Pet. 3 ..... dry
Fobb, Commercial Pet. 4-A 140
3-2s-5w Brown, Magnolia Pet. 1 3

Wells completed 19
Production 791
Dry 8
Gas 3
Gas production 6,000,000

CARTER COUNTY

32-1s-3w Martin, Magnolia Pet. 1 ..... dry
31-2s-1w Chase, Sturm & Slick 1 ..... dry
34-5s-1e Postoak, Amerada Pet. 1 ..... dry
19-1s-3w Watson, Magnolia Pet. 1 15
22-2s-3w Lohman, Wirt Franklin 2 ..... dry
24-2s-3w Smith, Magnolia Pet. 8 ..... gas
Smith, Magnolia Pet. 10 210
25-2s-3w Doleman, Atlantic O. P. Co. 3 .. 20
5-3s-2w Cobb, Atlantic O. P. Co. 2 .. dry
A. & P., Wirt Franklin 4 20
8-3s-2w Moyer, Humble O. & R. 1 47
10-4s-2w Walker, Simpson & Feil 2-A .. dry
28-5s-1e Clay, Amerada Pet. 18 160
32-1s-3w Johnson, Magnolia Pet. 1 ..... dry
8-3s-2w Ledbetter, Coline Oil 1 ..... dry
20-5s-1e Farve, Amerada Pet. 20 150
Baptiste, Amerada Pet. 20 35
19-1s-3w McCrory, Magnolia Pet. 1 15

Wells completed 18
Production 672
Dry 8
Gas 1
Gas production 4,000,000

MISCELLANEOUS COUNTIES

Comanche County—
30-2n- 9w Indian, Westheimer & Daube 1 13
3-3n-10w Hallum, Becker et al 2 ..... dry
30-2n-9w Price, Magnolia Pet. 2 50

Jefferson County—
33-6s-5w Seay, Gypsy Oil 1 2100
22-3s-8w Payne, Pace et al 1 ..... dry

—Pittsburg County—
8-2n-16e Wilkin, Barker 1 ..... dry

Grant County—
23-27-3w Crouch, Blackwell O. & G. 2 .. gas
Crouch, Blackwell O. & G. 1 .. gas

Pottawatomie County—
13-11-3e Floyd, Gwinnup et al 1 ..... dry

Pontotoc County—
34-5n-6e Roy, T. P. C. & O. Co. 2 ..... dry
9-4n-6e Burthrop, Amer. O. & R. Co. 1 . dry
31-4n-6e Hardon, T. P. C. & O. Co. 1 . dry

Garvin County—
12-2n-3e Delbeck, Goldenline Oil 1 ..... dry
19-3n-4w Ball, Magnolia Pet. 1 ..... dry

McIntosh County—
2-11n-17 Asbell, N. J. Weible 1 ..... dry

Caddo County—
8-8n-11w Foster, Crane & Smith 1 ..... dry

Kiowa County—
20-7n-16w Williams, Conner et al 1 ..... dry

Grady County—
23-5n-8w Kitsey Farwell, Mag. Pet. 2 ... gas
25-5n-8w Reed, Briscoe & Hall 3 ..... dry
26-5n-8w McCaughtry, Carter Oil 5 ..... gas
35-5n-8w Smith, Magnolia Pet. 4 ..... gas
35-3n-5w Winters, Melton Bros. 1 ..... dry

Washington County—
29-26-13 McBride et al, G. W. Gambill 12 15
1-26-13 Sherizer, Barnsdall Oil 10 12
3-27-13 Starr, G. I. Vandall 2 5
30-27-13 Buffington, D. W. Taylor 4 .. dry
33-28-14 Yokham, Lovain Oil 1 ..... dry

Rogers County—
6-22-17 Thurman, Great Southwestern Pet. 6 ..... dry
26-24-17 Drake, D. F. Busher 1 ..... dry
28-24-17 Lee, Tulsa parties 1 250

Nowata County—
4-25-17 Lamar & Norris, Salt Creek Oil 6 10

17-25-16 Willis, Midland Oil & Drlg. Co. 6 2

Wells completed 32
Production 2207
Dry 19
Gas 5
Gas production 63,250,000

OSAGE COUNTY

Rigs

35-29-10 L. C. Duffield 16.
8-27-6e Phillips Pet. 1.
29-27-6e Phillips Pet. 13.
8-27-11 Owen Osage Oil 355.
1-26-11 Mid-Kansas Oil 1.
7-25-8e John L. Bird 1.
19-25-8e Wrightsman et al 1.
24-25-8e Gilliland Oil 7.
34-25-11 Devonian Oil 11.
15-24-8e McCune et al 4.
25-24-8e Tidal Osage Oil 13.
2-21-8e Skelly & Moore 6.
10-21-10 Devonian Oil 4.
11-21-10 Mid-Kansas Oil 4.
8-21-11 Titus & Norris 1.

Wells Drilling

18-29-6e Lewis Oil 1.
14-29-9e Western American Oil 1.
20-29-9e Winona Oil 4.
22-29-11 Winona Oil 11.
3-28-6e Geo. Boles 1.
25-28-10 Osage Coal & Oil 354.
2-27-5e Phillips Pet. 7, 12. Skelly Oil 5.
26-27-5e Skelly Oil 5.
8-27-6e P. & R. & Comar Oil 2, 3.
17-27-6e Phillips Peters 2. Peters-Oliphant 3.
15-27-10 Barnsdall Oil 5.
16-26-6e Carter Oil 15.
21-26-6e Lewis Oil 15.
26-26-8e Petroleum Drlg. Co. 14.
12-25-5e R. W. Ryan Drlg. Co. 1.
12-25-8e I. T. I. Oil 5.
5-25-8e Continental Oil 1.
9-25-8e Oliphant et al 1.
29-25-8e The Texas Co. 5.
5-25-12 45 Oil Co. 39.
12-24-8e Atlantic O. P. 1.
28-24-10 Winona Oil 18.
26-23-10 Superior Oil 3.
18-22-9e Meridian Pet. 7.
23-22-11 Branstetter et al 1.
20-22-12 Winona Oil 1.
33-22-12 Knupp et al 1.
1-21-8e I. T. I. Oil 8.
3-21-8e Skelly-Moore et al 4.
11-21-9e Moore et al 5.
11-21-10 Tidal Osage Oil 3.
14-21-10 Okla. Nat. Gas 700.
18-21-10 Knupp & Bozo Oil 4.
22-21-10 Breene et al 15.
28-21-10 Titus & Norris 1.
30-21-10 Devonian Oil 1.
33-21-10 Roxana Pet. et al 1.
7-21-11 Titus & Norris 2.
25-21-11 Devonian Oil 8.
19-21-12 Kewanee Oil 7. Tidal Oil 22.
28-20-12 Continental Oil 12.

Shut Down

26-29-11 L. C. Hivick 1.
17-26-6e Seamans et al 1.
1-26-7e Morton et al 1.
1-26-9e Ike Johnson 1.
28-24-8e Axelrod et al 2.
20-23-10 Delmar Oil 1.
16-23-12 Superior Oil 1.
6-21-9e D. B. Flight 1.
23-21-10 Breene et al 15.
30-21-12 Elliott & Smith 20.
29-20-12 Winona Oil 2.

Rigs, 15; wells drilling, 57; total, 72.

TULSA COUNTY

Rigs

16-18-13 Parkins, Hutchinson O. & G. 1-A.
5-17-14 Hodge, Alboo Oil 1.

Wells Drilling

2-19-10 Grayson, Gleddon Oil 3.
4-19-10 Unallotted, O'Reilly et al 3.
14-19-10 Robinson, Gleddon, Holmes & Skelly 1.
3-19-11 Fee, Sand Springs Home Oil 1.
13-19-11 London, Sand Springs Home Oil 3.
15-19-11 Fife, Minahall et al 2.
17-19-11 Grayson, Pennock Oil 7.
22-19-11 Baughman, Holmes et al 1.
28-19-11 Holden, E. R. Minahall 2.
34-19-11 Inchoe, Sheridan Oil 1.
36-19-11 Wicey, Regan Oil 1-A.
9-19-12 Unallotted, John King 1.
30-19-11 Bodrey, Nowata O. & R. 3.
28-18-13 Cheney, Wilson et al 1-A.
18-18-14 Burgess, Edwards et al 1.
36-18-14 Moore, Helso et al 8.
2-16-12 Walker, W. C. Newman 16.
3-16-12 Sanderson, S. W. Anthony 2.
13-16-12 Unallotted, Winemiller et al 1.
11-16-13 Willis, Campbell et al 1-A.
14-16-13 Fox, Holmes et al 1.
16-16-13 Pemberton, Independent O. & G. 1.

Wells Shut Down

28-19-11 Fulsom, P. W. Fusselman 1.
4-19-14 Grayson, S. L. Johnson 1.
27-17-14 Slinton, Sparks et al 1.

Rigs, 2; wells drilling, 25; total, 27.

OKMULGEE COUNTY

Rigs

19-16-12 Bruner, Sheldon et al 1-A.
24-16-12 Tiger, Oklahoma Nat. Gas. 4, 12.
28-16-12 Willis, Sheridan Oil 3.
35-16-12 Stalcup, W. B. Pine 2.
19-16-13 Korndorfer, Turner et al 1-A.
12-15-12 Gay, Western Central Oil 1.
14-15-12 Hogan, Olean Pet. 10.
15-15-13 Kennedy, Rooch, Love et al 1.
22-15-12 Brown, Phillips Pet. 1.
3-13-11 Anderson, Vincent et al 1.
8-13-12 Morton H. C. Marcey et al 4.
22-13-12 Morton, Hally Oil 2.
3-12-12 Tiger, Veirson & Walters 3.
7-12-12 Wilson, Morton & Co. 5.
18-13-12 Clark, M. F. Maroney 1.
1-11-13 Thompson, Magnolia Pet. 6.
1-11-13 Blackwell, Pulaski Oil 5.
4-13-14 Foshoe, J. K. Gardner 4.
11-13-14 Tucker, A. G. Haslett 6.
13-13-14 Thornsberry, Iron Mtn. Oil 6.
15-13-14 Doule, C. H. Lebow 9.
25-13-14 Donegay, W. R. Sommerville 2-A.
7-13-15 Freeman, E. Leathers 1.
4-15-13 Foreman, F. B. Murta 1.
7-15-13 Field, Devonian Oil 6.
9-15-13 Hawkins, Blakely Oil 1.
19-15-13 Depriest, G. D. Terrion 1.
20-15-14 Lewis, J. A. Swindler 10.

Wells Drilling

30-16-11 Tiger, Sheridan Oil 1.
24-16-11 Ross, Paraffin Oil 5.
27-16-12 Haskins, Independent O. & G. 13.
29-16-12 Foley, Chief Drlg. Co. et al 1.
30-16-12 Houston, P. E. Williams 1.
19-16-13 Grant, Leonard Pet. 2.
14-15-11 Rogers, Waite Phillips 6. Rhodes, Waite Phillips 3.
23-15-11 Bruner, Le Bean et al 1.
32-15-11 Gooden, Misener et al 5.
10-15-12 Bighead, T. A. Johnson 3.
14-15-12 Hogan, Olean Pet. 9.
18-15-12 Coussens, Sam Bright 1-A. Bright, The Texas Co. 1.
20-15-12 Adams, D. D. Mickelson 6.
23-15-12 Arch, Noble O. & G. 1.
26-15-12 Lee, W. E. Hammond 4.
12-14-11 Biggerstaff, Simmons et al 8.
12-14-12 Warren, Abbott & Dillard 1.
25-13-11 Lewis, J. A. Swindler & Sons 4.
4-12-12 Tiger, Magnolia Pet. 1.
7-12-12 Wilson, Independent O. & G. 2, 3. Wilson, Morton & Co., 3, 4.
31-12-12 Rentie, Tribes Oil 4.
33-12-12 Been, Wooster Oil 7.
4-11-12 Hawkins, Heir et al 2.
5-11-12 Jackson, C. O. Buckler 1.
16-11-12 Grayson, H. & M. Oil 5.
17-11-12 Seaborn, W. B. Pine 4.
19-11-12 Sullivan, Empire G. & F. 9.
1-11-13 Thomas, Magnolia Pet. 10. Blackwell, Pulaski Oil 7. Coody, W. R. Sturdevant 1. Blackwell, Tidal Oil 7.
14-11-13 McIntosh, Nicholson Corp. 1.
5-12-13 Mickens, Gray 2.
36-12-13 Bruner, Pulaski Oil 8, 9.
6-12-14 Griffin, Kingwood Oil 3.
12-13-13 Gray, Mid-Continent Pet. 14.
2-13-14 Tucker, A. G. Haslett 1.
15-13-14 Scott, Utah Oil 15. Scott, G., Utah Oil 1.
21-13-14 Dunn, A. C. Saint 3.
29-13-14 Wiley, F. E. Cuseck 1-A.
8-13-15 Rule, E. J. Lambert 5.
23-13-15 McNack, O. Henson 1.
6-14-14 Harris, D. E. Kirkpatrick 3.
15-14-14 Colbert, J. G. Haas 12.
26-14-14 Flint, J. L. Shelby 14.
7-15-13 Misner, Devonian Oil 10, 11.
18-15-13 Long, J. G. Lyne 1. Doyle, W. B. Pine 3, 4, 5.
21-15-13 Kelly, J. L. Kirkland 2.
7-15-14 Brown, E. B. Grubbs 1.
10-15-14 Carter, Turman Oil 3.
19-15-14 Campbell, A. W. Cline 5.
20-15-14 Lewis, The Texas Co. 18.
25-13-11 Tobler, The Prairie O. & G. 13.

Shut Down

20-16-12 Fee, Crider 1.
27-16-13 Mingo, Prince et al 6.
35-16-13 Wicey, Edwards et al 12.
6-15-11 Thompson, H. C. Wilson 2.
17-15-11 Gibson, Shaffer O. & R. 6.
4-15-12 Kible, McCarthy et al 1.
8-15-12 Harjo, Iron Mtn. Oil 1.
9-13-11 Smith, Gowland et al 1.
27-13-11 Partee, E. R. Black 1.
28-13-11 Sands, Laurel O. & G. 1.
3-11-12 Calloway, E. Martin et al 1.
7-11-12 Holmes, Moffit et al 3.
17-11-12 Summers, M. C. French 1.
32-11-12 Ashbury, Webb et al 1.
33-13-14 Gambler, E. J. Lambert 2.
20-13-15 Beaver, A. Shelton 1.
22-14-14 Wright, Dunn Drlg. Co. 11.
10-15-14 Selle, C. C. Odell 1.
19-12-14 Batts, Sands Pet. 1.

Rigs, 29; wells drilling, 83; total, 112.

SEMINOLE COUNTY

Rigs

28-11-8e N. Williams, Continental Oil 3.
17-9n-7e Bull, Sinclair Oil 1.
8-9n-8e Buckner, Phillips Pet. 1.
18-9n-8e Peter, Southwestern Pet. 1.
6-7n-8e Dindy, Superior Oil 1.
1-7n-7e Sam, Wood & Hill 1.

Wells Drilling

1-11-8e Harris, Wilcox O. & G. 1.
10-11-8e Davis, Transcontinental Oil 1.
25-11-8e Williams, Phillips Pet. 1. Williams, Continental Oil 2.
32-11-8e Williams, Phillips Pet. 1.
33-11-8e Baker, Carter & Pulaski 7.
34-11-8e Whitfield, McMan & Mag. Pet. 2.
4-10-6e Madgett, Jarvis & Holmes 1.
33-10-6e Davis, F. J. Searight 1.
3-10-8e Hill, Nowata O. & R. 3.
15-10-8e Moss, Roxana Pet. 3.
31-10-8e Bleeker, Atlantic O. P. 1.
10-9n-5e Ingram, Morgan & Flynn 1.
15-9n-6e Noble, Superior Oil 1-A.
24-9n-6e Dyer, I. T. I. Oil 1.
7-9n-8e Cobb., Indpt., Jarvis & Holmes 1.
8-9n-8e Bethel, Twin State Oil 1.
17-9n-8e Johnson, Mid-Cont. Pet. 1.
18-9n-8e Jefferson, Shaffer O. & R. 1.
22-9n-8e Williams, Holmes & Jarvis 1.
31-8n-6e Pullatka, Superior Oil 1.
16-8n-7e Thomas, The Texas Co. 1.
36-8n-7e Logan, W. R. Ramsey 3.
20-8n-8e Brown, Homaokla Oil 1.
27-8n-8e Brown, J. W. McCullough 1.
29-8n-8e Walker, Dixie Oil 4.
33-8n-8e Fee, Magnolia Pet. 2. Long, Lewis & Clark 2-A.
4-7n-6e Wyan, Tribes Pet. 1.
22-7n-7e Davis, Transcontinental Oil 1.
26-7n-7e Fore, Dixie Oil 1.
5-7n-8e Harjo, Magnolia Pet. 1.
6-7n-8e Carolina, Homaokla Oil 2. Knight, Dixie Oil 4.
6-6n-8e Wingo, R. Garland & Co. 1.
24-5n-5e Nitley, Riverside & Kinney 1.
15-8n-7e Main, The Prairie O. & G. 1.
3-10-8e Owens, The Prairie O. & G. 5.

Shut Down

1-9n-5e Sanjo, F. J. Searight 1.
8-8n-8e Hill, Berry Pet. 1.
30-8n-5e Bowlegs, Chardner Pet. 1.
31-8n-8e Sampson, W. R. Ramsey 2. Salina, W. R. Ramsey 1. Amos, W. R. Ramsey 1.
6-7n-8e Hawkins, Buttram et al 1. Hawkins, P. & R. Corp. 1.
33-6n-6e Maxwell & Harvey 1.

Rigs, 6; wells drilling, 47; total, 53.

OKFUSKEE COUNTY

Rigs

4-13-8e Saryokishe, Link Oil 2.
1-13-9e Jones, Blakely O. & G. 1.
13-12-11 Looney, J. K. Leard 3.
14-12-11 Larsey, Keaton & Gold 2.
27-12-11 Holmes, Hartman 1.
32-12-11 Carolina, Josey Oil 2.
33-12-11 Fields, Josey Oil 1.
36-12-11 Rentie, M. K. I. P. Oil 15.
13-11-11 Holmes, Gladys Belle Oil 8.
7-10-12 Birdcreek, Guy Fisher & Carter 1.

Wells Drilling

23,13-7e Byrd, Sinclair Oil 1.
28-13-8e Hill, Dalton & Baker 1.
1-12-7e Bruner, Waite Phillips 1.
17-12-7e Hennechuchee, Mid-Kans. Oil 1-A.
18-12-8e Bear, Dalton & Baker 1.
13-12-11 Sugar, Angelo-Texas & N. Baltimore 7, 8. Harjo, American Pet. 9, 10, 11.
14-12-11 Larney, Betty Ann Oil 1. Bird, J. E. Dow 1-A.
15-12-11 Hendry, Windsor & Margay Oil 2.
32-12-11 Hulsey, Josey Oil 3.
33-12-11 McCoy, Josey Oil 8, 9. Stubblefield, Josey Oil 1. Carolina, Independent O. & G. 3.
34-12-11 Deer, G. & M. Oil 1.
35-11-9e Wind, Glicrease Oil 1.
36-11-9e Wind, Olean Pet. 2.
25-11-10 Chief, Atlantic O. P. 1.
13-11-11 Jefferson, Gypsy Oil 1. Jefferson, White Phillips 2. Holmes, Gladys Belle Oil 9. Holmes, Independent O. & G. 14.
20-11-11 Jackson, Kingwood Oil 1.
22-11-11 Holmes, Windsor Oil 4.
24-11-11 Fields, Lyons Pet. 8. Fields, Phillips Pet. 17. Fields, Minnehoma Oil 10.
15-10-9e Beardon, Phillips Pet. 1.
33-10-9e Barnett, Jennings et al 3.
10-10-11 School land, Transcontinental Oil 1.
14-10-11 Fife, Mid-Kansas Oil 1.
18-10-11 Alberty, Morgan, Flynn & Amerada 1.
31-10-11 Lasley, White Eagle O. & R. 1.
33-10-11 Cubbie, Tidal Osage Oil 2.
8-10-12 Fisher, McCarty et al 1.

Shut Down

14-12-8e Billy, Western States Oil 1. Iscac, Western States 1.
3-12-10 Hivem, Alex Bays et al 1.
8-12-10 Yarhola, Blakely et al 1.
23-12-10 Harjo, Blakely 1.
28-12-10 Johnson, Central Nat. Oil 1.
14-12-11 Larney, Independent O. & G. 1.
15-12-11 Gardner, J. W. Moore et al 1.
22-12-11 Jacobs, Independent O. & G. 1. Barnett, Hartman & Mann 7.
33-12-11 McCoy, Josey Oil 1.
25-11-9e Yarhola, Eagle Picher 1.
2-11-11 Smith, Tidal Oil 1. Watson, Tidal Oil 1.
3-11-11 Field, Barbara Oil 2.
10-11-11 Washington, Blakely O. & G. 2.
13-11-11 Holmes, Independent O. & G. 15.
19-11-11 Barnett, Riverland Oil 1-A.
22-11-11 Guy, Windsor Oil 7. Guy, Windsor & Independent O. & G. 3. Grayson, Windsor Oil 4.
15-10-9e Bruner, Burk Greis 1.
36-10-9e Dacon, Amerada Pet. 1.
15-10-10 Tiplaw, Pratt & Burton 1.

Rigs, 10; wells drilling, 63; total, 73.

HUGHES COUNTY

Rigs

23-9n-9e Bowlegs, Ramsey & Dempsey 2.
26-9n-9e Harjo, Transcontinental-Fuhrman, 2, 3, 5, 6. Proctor, Indept. & Darby Pet. 1. Farr, Independent O. & G. 1. Brown, Foster Inv. Co. 1. Davis, Foster Inv. & Independent O. & G. 1. Proctor, Empire G. & F. 1, 2, 3.
27-9n-9e Long, Gypsy Oil 1. Brown, Foster Inv. 1. Long, Phillips Pet. 1, 2.
18-8n-10 Diamond "B," Dixie Oil 3.
12-7n-9e Hawkins, J. W. McCullough 1.
11-5n-8e Stewart, Parmenter et al 1.

Wells Drilling

1-9n-9e D. Cain, Carter & Sands Pet. 2, 3, 4. Anderson, Atlantic O. P. & Bass 2, 6. Cain, Minnehoma Oil 2. Cain, Waite Phillips 2. Arbor, Josey Oil 5.
2-9n-9e Arbor, Phillips Pet. 3.
10-9n-8e Polk, T. B. Slick 3.
17-9n-9e Smith, Transcontinental Oil 1.
19-9n-9e Charles, I. T. I. Oil 1.
26-9n-9e Harjo, Transcontinental Oil & Fuhrman 1.
23-9n-10 Cunsy, Farmac-Yarnell Drlg. Co. 1.
28-9n-10 Canard, R. & R. Corp. 1.
4-9n-11 Harjo, Tidal Osage Oil 4. Harjo, Mid-Kansas Oil 3. Harjo, Gibson & Zahniser 4.
24-8n-8e Brooks, Champlin, Bass et al 1.
35-8n-8e Jefferson, Gypsy Oil 3.
29-8n-9e Lowe, Kingwood Oil 1.
25-8n-9e Harjo, Independent O. & G. 1.
27-8n-9e McFarland, Mid-Kansas Oil 1.
18-8n-10 Irvine, Dixie Oil 2, 4, 8. Diamond "A," Dixie Oil 2. Diamond "C," Dixie Oil 3.
18-8n-10 Seacrest, Independent & Amerada 1. Morrison, Independent O. & G. 2, 3. Alexander, Independent & Gladys Belle Oil 2, 3.
19-8n-10 Alexander, Carter Oil 3. Pickens, W. R. Ramsey 2.
24-8n-10 Christian, Independent O. & G. 1.
32-8n-10 Vorhees, Gypsy Oil 1.
28-7n-8e Bruner, J. L. Brock, Jr. 1.
13-7n-9e Irving, Independent O. & G. 1.
30-5n-10 Pearson, Henry Greis & Kerr 1.
28-9n-10 S. Canard, The Prairie O. & G. 1.

Shut Down

10-9n-10 Lee, Detrick et al 1.
4-9n-11 Harjo, Gibson & Zahniser 2.
11-8n-8e Larney, Dixie Oil 1.
12-8n-8e Herrod, Roxana Pet. 1.
35-8n-8e Bulling, Roxana Pet. 3.
31-8n-12 Barnett, W. C. Newman 2.
8-6n-10 Kirby Walton, Snyder & Marshall 1.

Rigs, 19; wells drilling, 48; total, 67.

MUSKOGEE & WAGONER COUNTIES

Rigs

6-14-17 Maneul, J. L. Slusher 1.
28-15-17 Taylor, J. M. Foltz 1.
8-16-18 Murrell, B. B. Wheeler 1.

Wells Drilling

26-13-16 Peter, T. A. Shepard 1.
14-13-18 Jordan, Herbert 1.
34-14-16 Roberson, Blakely 2.
1-14-17 Sango, T-O Pet. 7.
30-14-19 Harris, E. M. Johnson 2.
35-15-16 Lee, W. N. Harsha 2.
2-17-16 McIntosh, Myers 5.
19-17-16 Bruner, Neal & Cartwright 1.
24-17-16 Tiger, R. E. Fike 1.
25-17-17 Kidd, C. M. Bradley 1.
25-18-15 McKellop, A. E. Carder 3.
32-18-16 Woodward, P. Boyle 1.

Shut Down

1-12-17 Fulsom, C. E. Travis 1.
32-16-15 McDaniel, G. A. Simon 1.
4-16-17 Marshall, Harding & Uhrey 1.
36-16-17 Brown, Hale & Greer 2.
23-17-16 Childers, N. Carter 1.

Rigs, 3; wells drilling, 17; total, 20.

CREEK COUNTY

Rigs

24-19-8e Knight, J. B. Grieves 1.
14-18-8e Haslip, J. B. Chronic et al 1.
12-17-8e Bishop, Aztec Oil 1.
22-17-8e Johnson, Savoy Oil 1.
27-17-8e Bigpond, Inter-Ocean & Roland Oil 1.
17-15-8e Yarhola, Pure Oil 15. Wilson, Roxana Pet. 11. Roberts, Eastern Oil 5, 10.
20-15-8e Beaver, Skelly Oil 1-A.
5-14-7e Follopa, Wilcox O. & G. 1.
13-14-8e Beaver, C. G. Tibbens 4.
13-14-8e Beaver, The Texas Co. 4.
14-14-8e Francis, C. G. Tibbens 3.
35-17-8e ——, Nowata O. & R. 1.
18-18-9e Jones, Eva Bell Oil 3.
31-18-10 Hawkins, Madden & Madden 1.
2-18-11 Sherill, Sheridan Oil 2.
3-18-11 Tahlodge, Atlantic O. P. 1.
21-17-9e Harjoche, T. P. C. & O. Co. 5.
24-17-10 Tahkaney, J. H. Wright 4.
3-17-11 Layton, Jackson & Wise 2. Fife, S. L. Smith 2.
26-17-11 Newton, Wm. Gray 1-A.
30-17-11 Garald & Nichols, M. F. Evans 1.
24-17-12 Tingle, Craig et al 2.
7-16-9e Sango, W. R. Davis 1.
17-16-9e Beaver, T. P. C. & O. Co. 7.
20-16-9e Barnett, Dickerson et al 1.
12-16-11 Ricks, H. U. Bartlett 1.
18-15-10 Maloney, Berry Pet. 1-A.
29-15-10 Cover, Independent O. & G. 2.
5-14-9e Thompson, C. G. Tibbens 1.
17-14-10 Johnson, Quinlan et al 2. Johnson, Donnelly et al 4.

Wells Drilling

11-19-8e Miller, H. U. Bartlett et al 1.
13-19-8e Louie, J. B. Grieves 5.
14-19-8e Lewis, Gled Oil 4. Miller, Gled Oil 1. Hinton, Kiskadden et al 2. Miller, Okla. Eastern Oil 1.
13-17-8e Harjo, Transcontinental Oil 3.
14-17-8e Fry, Alvard & West 2.
18-17-8e Hill, Black & Gold Oil 1-A.
19-17-8e Cubbie, Transcontinental Oil 1.
26-17-8e Cobb, Waite Phillips 1.
32-17-8e Washington, Olean Pet. 6.
20-16-8e Kanard, Waite Phillips 1.
3-15-7e Rogers, Atlantic O. P. 2.
25-15-7e Charles, Lima O. & G. 1.
36-15-7e Bigpond, Henry & Karcher 1.
25-15-8e Watley, C. G. Tibbens 1.
30-15-8e Benjamin, Empire G. & F. 2. Helacoweney, Phillips Pet. 2.
34-15-8e Sewell, C. G. Tibbens 2.
7-14-7e Hood, Roxana Pet. 3.
12-14-8e Ponds, Haskell Oil 3.
12-14-8e McKan, Skelly Oil 8, 9.
13-14-8e Sarty, Phillips Pet. 2, 3. Sewell, C. G. Tibbens 9.
14-14-8e Francis, C. G. Tibbens 2.
28-14-8e Mitchell, Papoose Oil 1.
4,19-9e Hall, Sand Springs Home Oil 1.
27-18-10 Allen, Vaughn & Wheeler 6.
18-18-11 Euckie, Ira Anderson 1.
28-18-11 Pahcahney, Riverland Oil 1. Stidman, Skelly Oil 1.
33-18-11 Sapulpa, J. Livingston 1.
6-18-12 Gray, Gypsy Oil 2, 3, 4.
12-18-12 Morrison, O. N. West et al 4.
1-17-9e Bowlegs, Dixie Drlg. Co. 1.
19-17-10 Jacinta, Amerada Pet. 1.
23-17-10 Kichaney, Bu-Vi-Bar Pet. 1-A. Kochaney, J. H. Wright 2. Holder, J. H. Wright 2.
27-17-10 Buckter, A. Wilcox O. & G. 1.
8-17-11 Freeman, Ireland et al 3.
10-17-11 Hawkins, H. E. Williams 1. Cumsey, Dean & Wickers 1.
25-17-12 Keefer, The Texas Co. 3.
16-16-9e Unallotted, C. H. Stokes 1.
20-16-9e Cobb, Penrod & Thompson 3.
1-16-10 Ralston, Sherry et al 1. Anthis, Wilcox & Oswalt 6, 3.
11-16-11 Berryhill, Skelly Oil 1.
28-15-9e Fields, The Texas Co. 1.
30-15-9e Unallotted, C. G. Tibbens 18, 19, 20. Winters, T. B. Coryell et al 1.
27-15-10 Douglas, Simmons & McGeehan 1.
11-14-10 Webb, H. George et al 1.
17-14-10 Johnson, Quinland et al 1. Johnson, Gladys Belle Oil 3.
18-14-10 Harjo, Southwestern Oil 4. Unallotted, P. & R. Corp. 1.
20-14-10 Stuart, Chas. D. Noble 8. Kimble & Reading, Wilcox O. & G. 6.
33-14-10 Kimble & Reading, Darby Pet. & Burk Greis 1.
13-17-8e Smith "B", The Prairie O. & G. 1.
5-16-8e Hammer, The Prairie O. & G. 10.
20-14-10 Knight, Hall & Donnelly 1.

Shut Down

5-19-8e Noble, Whitten et al 1.
24-17-8e Harjo, Waite Phillips 2.
32-17-8e Washington, Olean Pet. 2.
29-16-8e Hawkins, Clayton, Lynch et al 1.
32-18-11 Frew, Cross et al 2.
19-17-10 Wanuke, Sherman et al 2.
5-17-11 McDougal, W. J. Cole 1.
13-17-11 McIntosh, A. Sheldon 1-A.
5-17-12 Crow, Jackson & Wise 14.
36-16-9e Allen, Williams & Bell 1.
3-14-10 Meyers, Central Nat. Oil 1.
5-14-10 Groom, Evans et al 1.
20-14-10 Kimble & Reading, Wilcox O. & G. 12.

Rigs, 35; wells drilling, 84 total, 119.

PAWNEE COUNTY

Rigs

22-23-4e Zoldoskie, Donahue & Carter Oil 4.
36-23-4e School Land, Magnolia Pet. 1.
35-21-7e Armstrong, Selby & Gypsy 1-A.
35-21-8e ——, Tidal Oil 6.
9-20-6e Fugate, Magnolia Pet. 1.
16-20-6e School Land, Magnolia Pet. 2.
19-20-6e White, Walter E. Brown 1.
7-20-8e Martin, Roy Sears et al 1-A.

Wells Drilling

33-23-3e Miller, Watchorn O. & G. 12.
4-22-3e Miller, Magnolia Pet. 8, 9, 10.
5-22-3e Altaffer, Magnolia Pet. 2. Wolf, Champlin Ref. 1.
34-24-5e Venator, Mid-Kansas Oil 1.
27-23-4e Brian, Sinclair Oil 2.
4-23-5e Krow, Magnolia Pet. 1.
5-23-5 Phillips, Haley, Garber & Pulse 3.
29-23-5e Newport, Magnolia Pet. 1.
3-22-5e Ackerman, E. B. Rich et al 1.
16-22-7e ——, Bu-Vi-Bar Pet. 1.
11-21-5e Redd, F. R. Gillingalea 1.
17-21-7e Diehnel, R. E. Freeman 2.
36-21-7e School Land, Mid-Cont. Pet. 6.
32-21-6e Moyer, Adamson Oil 3.
35-21-8e ——, Gypsy Oil 11.
9-20-6e Fugate, Magnolia Pet. 3.
16-20-6e Baker, Magnolia Pet. 8.
1-20-7e Hullendore, Selby & Gypsy Oil 2, 21.
4-20-7e Hallet townsite, W. A. McCabe et al 1.
8-20-7e Fleming, Twin State Oil 7. Lucas, Sun Ray Oil 1.
11-20-7e Rogers, Black & Carnahan 1-A.
16-20-7e School Land, Mid-Cont. Pet. 14.
35-20-7e McMuttrie, Chas. H. Burton 1.
5-20-8e Aten, Adamson & Sun Ray Oil 2.
7-20-8e Childers, Minnehoma Oil 3. Martin, Sheltz et al 2.
9-20-8e Vowell, Minnehoma Oil 8.
23-20-8e Van Eman, Selby O. & G. 3. Davis, Southwestern Oil Fields Corp. 7.
24-20-8e Hennessey, McMahan Oil 4.
19-21-8e Bocher, The Prairie O. & G. 19.

Shut Down

33-23-3e Brown, Watchorn O. & G. 1. Miller, Marland Oil 2, 4.

4-23-5e Bahlman, Mid-Kansas Oil 1.
22-22-6e Tracey, New England O. P. & L. 1.
25-22-6e Bell, Victor Oil 1.
29-21-8e Davis, Rube De Long 1-A.
31-21-8e ——, Bryan Bros. 1-A.
28-20-6e White, Davis Drilling Co. 1.
Rigs, 8; wells drilling, 45; total, 53.

KAY COUNTY

Rigs

20-29-1w Day, The Texas Co. 1.
21-29-1w Duncan, Comar Oil 6.
Harvell, Comar Oil 6.
McCormick, Comar Oil 5, 6.
8-28-1w Oxarol, Connelly & Laraux 1.
6-28-1e Wolfe, McComas et al 1.
28-28-2e Huddleson, John Stark et al 1.
18-27-1e Preston, Lee Master et al 1.
3-27-2e Blazer, Mississippi Valley Oil 1.
1-26-2w Richmond, Marland & Amerada 4.
15-25-2w Thomas, Carter Oil 3.
Thomas, Marland Oil 6, 7.
16-25-2w School Land No. 24, Marland Oil 2-A.
28-25-1w Siler, L. Freidman 2.

Wells Drilling

13-29-2w Olson, Marland Oil 1.
21-29-1w Priboth, Comar Oil 6.
Duncan, Comar Oil 5.
16-29-1e School Land, Marland Oil 1.
School Land No. 1, Wentz Oil 1.
8-28-1w Townsite, Herbert Oil 1.
Townsite, Mid-Continent Pet. 1.
Townsite, C. B. Davis 1.
4-27-1w Case, Polling & Denny 2.
5-27-1w Jamieson, Blackwell O. & G. 1.
7-27-1w Bailey, Ostot Drig. Co. 1.
8-27-1w Massey, Blackwell O. & G. 1.
Harris, Polling & Denny 2.
9-27-1w Burkholder, The Texas Co. 1.
16-27-1w Barr, Manahan et al 2.
Slocum, Anolu Oil 3.
17-27-1w Robinson, Marland Oil 1.
24-27-1w McClelland, M. F. McComas 1.
32-27-1w Chambers, O'Kansas 1.
29-27-1e ——, McIntyre & Foster 1.
26-27-1e School Land No. 6, Mid-Cont. Pet. 1.
22-27-2e Butler, Mississippi Valley Oil 1.
29-27-2e Welge, Golconda Oil 1.
31-27-2e Schmidt, Comar Oil 1.
1-26-2w Fitzgerald, Marland Oil 4, 5.
Hockstatter, Marland Oil 1, 1-A.
Richmond, Marland & Amerada 3.
Richmond, Mutual Oil 2.
12-26-2w North, Marland Oil 2.
Hubbard, Marland Oil 4.
12-26-1w Sodowsky, Harris & Hahn 1.
9-25-2w Chambers, Gypsy Oil 1.
15-25-2w Thomas, Carter Oil 3.
Herbig, Gypsy Oil 1.
Thomas, Marland Oil 1, 4-A, 5.
16-25-2w School Land No. 24, Marland Oil 7.
Thomas, Carter Oil 1.
21-25-2w Turk, Marland Oil 1, 4.
22-25-2w Stahl, Marland & Phillips Pet. 1.
Siler, Twin State Oil 1, 5.
26-25-2w Hangartman, Independt O. & G. 1.
33-25-2w School Land, Pennok Oil 1.
School Land, Mid-Cont. Pet. 1.
27-25-1w Davis, The Texas Co. 14, 15.
28-25-1w Mahoney, Wentz Oil Corp. 7, 8.
30-25-1w Pool, Carter Oil 1.
33-25-1w School Land, Cosden & Marland 9, 11.
34-25-1w Beverlin, Comar Oil 9-W.
35-25-1w Endicott, T. B. Slick 7.
14-25-1e Little Chief, O'Kansas Oil 1.
1-28-3e Cortes Oil 1.
21-28-4e A. D. Morton 1.
20-27-4e LeWright & Gay 1.
24-27-4e D. W. Moore 1.
9-27-1w Brown, Harris & Hahn 2.
21-25-2w Holsington, The Prairie O. & G. 1.
20-25-2w McMillen, The Prairie O. & G. 1.
1-26-2w Smith "A", The Prairie O. & G. 2.
35-29-2w Sheets, Hickman & Barnhart 1.
21-29-1w Priboth, Comar Oil 2.
20-28-2w Smith, Mississippi Valley Oil 1.
3-28-1w David, Day Oil Co. & Ketcherid 1.
5-28-1w Jones, E. V. Shawver 1.
Orr, Comar Oil 1.
6-28-1w Via, Amerada Pet. 1.
7-28-1w Vickers, T. B. Slick 1.
8-28-1w Townsite, Wrightsman Pet. 1.
Townsite, Louis Friedman 1.
Townsite, Nelson, Ostot et al 1.
Townsite, Mummert et al 1.
Townsite, Stanley & Jones 1.
Townsite, Triangle Oil 1.
Townsite, Mid-Cont. Pet. 1.
Townsite, S. B. Wendall et al 1.
Townsite, Joe Cain et al 1.
Townsite, Joe Cain et al 1, 1, 1.
Townsite, Canadian Pet. 1.
Townsite, Lassen et al 1.
Townsite, L. & M. Oil 1.
Townsite, Broadhurst et al 1.
Townsite, Benedum & Trees 1.
Townsite, Windlie et al 1.
Townsite, Walls & Wade 1.
Townsite, Fitzgerald Const. Co. 1.
Townsite, Jackson et al 1.
Townsite, Bird Vergress et al 1.
Townsite, J. Fred Harrison 1.
33-28-1w School Land, Simms Oil 3.
11-28-1e Lovegay, Ohio Northern O. & G. 1.
3-28-3e Eaton, Parkhurst & Graham 1.
31-28-3e Street, Davis Drig. Co. 1.
36-27-2w School Land, Mid-Cont. Pet. 1.
16-27-1w Skelton, Manahan et al 3.
18-27-1w Johnson, Una Lee Oil 1.
1-26-2w Richmond, Mutual Oil 3.
Richmond, Empire G. & F. 1.
6-26-1w Glasgow, Natl. Union Oil 1.
7-26-1w Kaney, Blackwell O. & G. 1.
4-25-2w Kreger, Clair Smith 1.
15-25-2w Herbig, Gypsy Oil 2, 3.
Herbig, Selby Oil 1.
Hallman, Comar Oil 1, 2.
16-25-2w School Land, Mid-Cont. Pet. 1, 2.
School Land No. 24, Marland Oil 4, 5, 6.
22-25-2w Birdsell, Marland Oil 1.
Siler, Twin State Oil 3, 6.
27-25-2w Simmons, W. E. Brown Oil 1.
33-25-1w School Land, Cosden & Marland Oil 10.
34-25-1w Endicott, Pennok Oil 2.
32-29-4e King Drig. Co. 1.
36-28-4e Terminal Oil 1.
Rigs, 16; wells drilling, 128; total, 144.

PAYNE COUNTY

Rigs

2-20-2e Catta, Colorado O. & G. 1.
23-20-4e Windstaff, Wentz Oil 1.
36-19-4e School land, Magnolia Pet. 1.
17-19-5e McKaughn, The Texas Co. 1.
22-18-3e Nelson, J. A. Hull Oil 1.
26-18-3e Waltman, T. C. M. Oil 1.
10-18-4e Cole, Deep Rock Oil 1.
2-18-6e Lorett, Blauner & Hartley 1-A.
27-18-6e Culbertson, McGill et al 1.

Wells Drilling

24-19-4e Pleasants, Olean Pet. 1.
27-19-4e Chevalier, Magnolia 10.
8-19-5e Garr, Garr Oil 5.
35-19-5e Laughlin, Josey Oil 2, 9, 10.
23-18-3e Goodno, Deep Rock O. & G. 2, 3.
Derry, Deep Rock O. & G. 2, 3, 4.
Shannon, Deep Rock O. & G. 1.
Boyles, Deep Rock O. & G. 1, 2, 3, 4.
Posey, Deep Rock O. & G. 1.
Haley, Amerada Pet. 2, 1.
Ostrander, Pure Oil 1.
26-18-3e Barth, Deep Rock O. & G. 2.
23-18-4e Boyles, New England O. & P. L. 2.
31-18-4e ——, Mulberry Oil 2.
2-18-5e Busbee, Josey Oil 2.
Laughlin, Shaffer O. & R. 15.
7-18-5e Blue, Marland Oil 2.
18-18-5e Harlow, Carter Oil 2.
5-17-4e Strawn, Mulberry Oil 3.
Flint, Mulberry Oil 2.
Sharrum, Shaffer O. & R. 3.
Home Gas Co. 1.
6-17-4e Foster,

Shut Down

21-19-1w Lewis, Ponca O. & G. 1.
8-19-5e Garr, Garr Oil 4.
23-18-3e Haley, Amerada Pet. 3.
1-18-5e Laughlin, Home Gas Co. 4.
Laughlin, Josey Oil 4.
30-18-5e Driggs, Willis O. & G. 2.
Rigs, 9; wells drilling, 37; total, 46.

LINCOLN COUNTY

Rigs

26-16-5e Rittenhouse, Flynn & Morgan 1.
35-15-5e Caves, Gypsy Oil 5.
2-14-5e Hopkins, Skelly Oil 3, 4.
Tipton, The Texas Co. 8.
Tuttle, Carter Oil 4.
Sukovaty A, Magnolia Pet. 13, 15.
2-14-5e Bellesa, Amerada Pet. 4.
Bellesa, Magnolia Pet. 1.
11-14-5e Caves, Gypsy Oil 4.

Wells Drilling

3-14-5e Stout, Prairie O. & G. 13, 14, 15.
35-15-5e A. Sproleder, Prairie O. & G. 1.
19-17-3e Sutton, Roy Willis et al 1.
20-15-5e Elliott, L. T. I. Oil 1.
25-15-5e Stahl, Flynn, Morgan & Young 1.
34-15-5e M. P. Sproleder, Magnolia Pet. 5.
35-15-5e Jefferson, Pure Oil 3, 4, 5.
Caves, Gypsy Oil 2, 3, 4.
School land, Mid-Kansas Oil 1.
6-15-6e Earp, Carter Oil 2.
7-15-6e Ford, Skelly Oil 3.
Spurgeon, Gypsy Oil 1.
8-15-6e Earp, Mid-Cont. Pet. Corp. 1.
7-14-4e Kentzelten, W. M. Schriver 1-A.
12-14-4e Leake, Pure Oil 2.
2-14-5e Hopkins, Galves Oil 2.
Hopkins, Skelly Oil 2.
Tipton, The Texas Co. 7, 9.
Bigwater Twin State Oil 7, 8.
Tuttle, Carter Oil 2, 3.
Tuttle, Carter Oil 2, 3.
A. Sukovaty, Magnolia Pet. 7, 8, 9, 10, 11, 16.
3-14-5e Bellesa, Amerada Pet. 2, 3.
P. Sukovaty, Magnolia Pet. 6.
F. Sukovaty, Magnolia Pet. 5, 7, 8.
Bagwell, Selby & Southwestern Pet. 9, 10.
4-14-5e Thompson, Magnolia Pet. 2, 3.
Strough, The Texas Co. 1.
5-14-5e Martin, Magnolia Pet. 1.
10-14-5e Nickel, Phillips Pet. 1.
Nickel, Shaffer O. & R. 1.
11-14-5e Caves, Gypsy Oil 2, 3.
Chapman, Magnolia Pet. 1.
16-14-5e School land, Magnolia Pet. 1.
7-13-3e Ewin, Douglas Oil 1.
12-13-6e Reeves, Amerada Pet. 1.
14-13-6e Helmig, P. & R. Corp. 1.
26-12-2e Dodrill, Eugene Costa, et al 2.
5-12-3e Jones, Wilcox O. & G. 1.
31-12-6e Bentley, J. W. McCullough 1.

Shut Down

20-17-6e Johnson, Hiram C. Wilson 1.
33-17-6e Messawat, Independent O. & G. 1.
36-15-4e Cull, Ruby et al 1.
5-15-6e Howard, Independent O. & G. 1.
8-15-6e Earp, Mid-Cont. Pet. 2.
15-15-6e Hubbard, Johndahl 1.
Rigs, 11; wells drilling, 65; total, 76.

GARFIELD COUNTY

Rigs

15-23-5w Hennessey, Wilcox O. & G. 1.
36-23-5w Nelson, Ostot et al 1.
13-22-4w School land, Cosden & Marland 57, 60.
Denker, Sinclair Oil 27, 28.
Walker (North), Sinclair Oil 29.
19-22-3w Kisner (West), Sinclair Oil 25, 26.
31-22-3w McLean, Chas. Knox 3.
11-21-4w Fee, Beople et al 1.

Wells Drilling

1-22-4w Johnson, Prairie O. & G. 2.
12-22-4w Wishard, Prairie O. & G. 6.
14-24-3w Gorusch, Fogar Oil 1.
34-24-3w Hays, Roxana Pet. 1.
19-23-3w Garber, Marland Oil 1.
13-22-4w Wolfe, Roxana Pet. 2-W.
School land, Cosden & Marland 55, 58, 59, 61.
Walker (North), Sinclair Oil 24, 26, 27, 28.
15-22-4w Searcy, Magnolia Pet. 3.
24-22-4w Belveal, Healdton Pet. 31, 32.
Belveal, Sinclair Oil 31.
Walker (South), Sinclair Oil 26.
Beggs, Champlin Ref. 34.
Dively, Carter Oil 54, 55.
25-22-4w Hoy, Sinclair Oil 21.
36-22-4w Ed Kisner, Sinclair Oil 6.
Mitcher, Sinclair Oil 15.
18-22-3w Whitney, Haley, Garber & Pulse 2.
Roxana Pet. 4-W, 6-W, 7-W, 8-W, 9-W, 10-W, 11-W, 12-W, 13-W.
Shaffer, Sinclair Oil 10.
Hartley, Sinclair Oil 20, 21, 22, 24, 26.
19-22-3w Kisner (West), Sinclair Oil 23, 24.
20-22-3w Markel, Beople et al 1.
30-22-3w Burns, Sinclair Oil 1.
L. Crews, Sinclair Oil 10.
12-21-5w Smith, Tidal Oil 1.
4-21-3w Cleek, Pender Pet. 1.
22-21-3w Detwiler, Slick, Harrington et al 1.
11-20-8w Secor, Garfield Buell et al 1.

Shut Down

10-24-4w Myers, Sinclair Oil 1.
17-23-8w Dyche, Jack Reid et al 1.
26-23-7w Cox, Katherine Oil 1.
6-23-6w Hess, Weir & Wood 1.
35-23-3w Carter, Failing & Lawson 1.
3-22-5w Swinery, Ashby & Barr 1.
1-22-4w Seaman, Hopper et al 1.
13-22-4w Wolfe, Roxana Pet. 3.
School land, Cosden & Marland 56.
14-22-4w Dively, Sinclair Oil 5.
24-22-4w Belveal, Sinclair Oil 28.
Dively, Carter Oil 52, 53.
25-22-4w Frickenschmidt, Sinclair Oil 11.
27-22-4w Peters, Hopper et al 1.
36-22-4w Helm, Imo Oil 8.
5-22-3w Mayes, Carlew Drig. Co. 1.
19-22-3w Crews, Crews Heirs Oil 18.
Kisner (East), Sinclair Oil 3.
2-21-7w Montgomery, Frank Frantz 1.
31-21-5w Vanderwork, E. A. Summers 1.
12-21-4w Schriver, Beople et al 1.
8-21-3w Bartles, Dieckwald Oil 1.
7-20-6w Semrad, O. O. Owens 1.
13-20-4w Faramel, Summers et al 1.
Rigs, 11; wells drilling, 76; total, 87.

NOBLE COUNTY

Rigs

6-24-2w Stephenson, Marland Oil 1.
16-24-1w School land, Cosden & Marland 11.

Wells Drilling

18-24-2w Coulter, Olean Pet. 1.
2-24-1w Blubaugh "A," Comar Oil 24-W.
30-24-1w Wilkins, Mid Co. Pet. 12.
Wilkins, Wentz Oil 10.
36-24-1e Warrior, Gypsy Oil 1.
15-23-2w Washburn, Sinclair Oil 1.
1-22-2w White, K. D Oil 1.
26-22-2w Shoop, Champlin Ref. 1.
33-22-2w Burk, Elane Oil 1.
27-22-1e Wentz (Fee), Wentz Oil 1.
14-21-2w Austin, Magnolia Pet. 1.
15-21-2w Taylor, Magnolia & Bu-Vi-Bar 1.
16-21-2w Hauffman, Red Bank Oil 1.
Treman, Red Bank Oil 1.
21-21-2w Reynolds, Magnolia & Bu-Vi-Bar 1.
Wooleson, Magnolia & Bu-Vi-Bar 1.
22-21-2w Young, Magnolia & Bu-Vi-Bar 1.
Weeder, Magnolia Pet. 1.
28-21-2w Snyder, Bu-Vi-Bar Pet. 1.

Shut Down

29-24-1w Reed, Mid-Cont. Pet. 6.
14-24-2e Edmonds, Ossenbeck et al 1.
7-21-1w Williams, R. L. Corley 1.
29-21-1e Theile, Bell Pet. 1.
12-21-3e Sawyer, Ossenbeck & McMann 1.
32-20-1e Hall, Nelson & Hardin 1.
Rigs, 2; wells drilling, 25; total, 27.

GRADY COUNTY

Rigs

21-10-8w Thompson, Hawkins & Young 1.
2-8n-8w Bray, John Schwartzfisher 1.
29-6n-7w Brown, Becker et al 1.
34-6n-8w Scott, Hall-Briscoe 1.
35-5n-8w McCaughtry, Little Nick Oil 2.
2-4n-8w Dryden, Carter Oil 2.
Dryden, Okla. Natural Gas 1.

Wells Drilling

31-8n-7w Webb, Watchorn O. & G. 1.
14-5n-8w Moore, Briscoe & Hall 1.
23-5n-8w Sanford, Stogner et al 3.
23-5n-8w Edmondson, Skelly Oil 2.
Farwell, Magnolia Pet. 3.
24-5n-8w Farwell, Briscoe & Hall 1.
26-5n-8w Farwell, Magnolia Pet. 5.
Smith, Noble & Westerfelt 3.
24-5n-8w Scott, Carter Oil 1.
35-5n-8w McCaughtry, Kipp et al 1-A.
8-5n-6w Thomas, Becker-Reed Oil 1.
11-4n-8w Williams, Magnolia Pet. 2.
Rockhold, Magnolia Pet. 3.
16-4n-6w Bryant, Carter Oil 1.
26-4n-6w Pursley, Carter Oil 1.
5-3n-5w Gardenhire, Carter Oil 1.
27-3n-5w Ponds, Joe Ray 1.

Shut Down

23-5n-8w Edmondson, Skelly Oil 1.
25-5n-8w Deryden, J. B. Nicholas 1.
35-3n-5w Lindsey, Garvin Drig. Co. 1.
Rigs, 7; wells drilling, 29; total, 27.

STEPHENS AND COTTON COUNTIES

Rigs

2-2n-5w Goza, Pauline et al 1.
25-1n-9w Harris, Magnolia Pet. 11.
26-1n-9w Brown, Atlantic O. P. 1.
34-1n-9w Castle, Illinois-Okla. Pet. 1.
9-1n-8w Scruggs, E. N. Rust 1.
3-1n-5w Talley, Shaffer & Mangan 1.
19-2s-7w Isaacs, Mid-Kansas Oil 7.
2-3s-6w Florence, Gibbons & Johnson 1.

Wells Drilling

26-2n-9w Richardson, Flowers et al 1-A.
2-2n-5w Garza, Carter Oil 1.
11-2n-5w Inherwood, Rogers et al 1.
12-2n-5w Prince, Knox Pet. 1.
29-2n-5w Rose, David Montgomery 1.
1-2n-4w Lindsey, Humble O. & R. 1.
25-1n-9w Hines, Ka Wye Drig. Co. 7.
26-1n-9w Brown, Eagle Creek Oil 5.
26-1n-9w Brown, Eagle Creek Oil 5.
Fleming, Magnolia Pet. 1.
2-1n-5w Payne, Shaffer & Mangan 1-A.
14-1s-10w Indian, Ellis & Caraker 1.
25-1s-9w Russell, Magnolia Pet. 3.
7-1s-8w Dyal, Know Pet. & Owl Oil 1.
27-1s-8w Wilkinson, Big Twelve Oil 2.
Taliaferro, Big Twelve Oil 3.
28-1s-8w Springer, Winkler et al 2.
32-1s-8w Shelton, Grant et al 13.
Shelton, Crump & Beard 6.
Smith, Crump & Beard 12, 13.
Story, Empire G. & F. 4.
Potts, Lorraine Pet. 3.
33-1s-8w School land, Magnolia Pet. 19.
34-1s-8w Kagay, Magnolia Pet. 15.
35-1s-8w Hanson, Brannon et al 1.
2-2s-8w Gilworth, Pace et al 1-A.
5-2s-8w Miller, Empire G. & F. 7.
12-2s-8w Fobb, Commercial Pet. 2-B.
13-2s-8w ——, Dierkee & Coate 1.
17-2s-7w Carter, Magnolia Pet. 6.
29-2s-7w Bristowe, Womack 1-A.
8-2s-6w Armstrong, Gant et al 2.
3-2s-5w Brown, Magnolia Pet. 2.
14-2s-5w Holden, Magnolia Pet. 1.
31-2s-5w Halloway, Homaokia Oil.
11-2s-4w Yates, Magnolia Pet. 1.

Shut Down

2-2n-5w Simms, Carter-Knox 1, 3.
11-2n-5w Isherman, Knox Pet. 2.
25-1n-9w Hines, Ka Wye & Roxana Pet. 1.
31-1n-8w Hinser, Laco-Kinsey 1-A.
34-1s-8w Burke, David Oil 1.
4-1s-7w Fee, Ballard-Choptaw 1.
Rigs, 8; wells drilling, 43; total, 51.

PONTOTOC AND GARVIN COUNTIES

Rigs

28-5n-5e Copeland, La Salle et al 1.
4-4n-6e Daggs, Healdton O. & G. 1.

Wells Drilling

33-5n-8e Shields, Homaokla Oil 1.
5-4n-5e Starritt, Bronson & Doyle 1.
14-4n-7e Norris & Beck, Howarth O. & G. 1.
35-3n-2e Franklin, T. P. C. & O. Co. 1.
32-3n-3e Hensley, Mid-Cont. Pet. 1.
6-3n-7e Alberson, Lloyd & Smith 3.
5-1n-1e Christner, L. D. Jones 1.

Shut Down

31-5n-5e Lewis, La Salle et al 1.
25-5n-6e Patterson, Gillette & Krueger 1.
34-5n-6e Roy, T. P. C. & O. Co. 3.
Nelson, Boles & Smith 1.
26-5n-8e Harjo, Dixie Oil 1.
21-4n-1w Florence, Bedman et al 1.
17-4n-6e Witherspoon, American O. & R. 2.
18-4n-6e McClure, Bryan & Gillette 1.
28-4n-7e Faulkner, Hughes et al 2.
10-3n-3e Hattie, Heath & Bauman 1.
8-1n-3e Deryden, Magnolia Pet. 2.
16-1n-3e Parnell, T. P. C. & O. Co. 3.
17-1n-3e Deryden, Hope & Wilson 1.
Deryden, The Texas Co. 9.
18-1n-3e Deryden, Simms Oil 1.
Rigs, 2; wells drilling, 22; total, 24.

CARTER COUNTY

Rigs

19-1s-3w Hardin, Magnolia Pet. 4.
34-1s-3w Newstadt, Gilmer 1.
Snider, Magnolia Pet. 1.

Woodward County—

22-2s-3w Carpenter, Twin State Oil 2.
26-2s-3w Swartz, Magnolia Pet. 1.
15-2s-2w Johnson, Magnolia Pet. 1.
8-3s-2w Watkins, Cameron-Noble 2.
9-4s-2w Hewitt-Walker, Humble O. & R. 19.
20-5s-1e Baptiste, Amerada Pet. 21.
Farve, Amerada Pet. 21.

Wells Drilling

19-1s-3w Winters, Magnolia Pet. 1.
Hardin, Magnolia Pet. 3.
Jordan, Humble O. & R. 3.
34-1s-3w Fish, Magnolia Pet. 2.
21-2s-3w McClish, Skelly Oil 1.
22-2s-3w Carpenter, Twin State Oil 1, 6.
Calvery, Wirt Franklin 1.
23-2s-3w Lohman, Magnolia Pet. 5, 7, 8.
24-2s-3w Smith, Magnolia Pet. 9-A.
Walker-Vorhees, Cameron Ref. 5, 6.
25-2s-3w Jefferson, Twin State Oil 7.
6-2s-2w Higgins, Coline Oil 3.
7-2s-2w Pierce, Lively & Tucker 1.
Pierce, Coline Oil 7.
8-2s-2w Pierce, Carter Oil 1.
30-2s-2w Ellis, Truman Oil 7.
3-3s-3w Potter, Amerada Pet. 1.
1-3s-2w Rollins, Magnolia Pet. 1.
8-3s-2w Mullen, Coline Oil 3.
Moyer, Merrick-Cameron 6.
Moyer, Humble O. & R. 2.
9-4s-2w Lowery, Simpson & Fell 2.
Hazel-Vorhees, Simpson & Fell 3.
Hewitt-Walker, Humble O. & R. 18.
22-4s-2w Dillard, Baker Strawn 12.
22-4s-1w Black, Empire O. & R. 1.
1-4s-3e Barnes, Humble O. & R. 1.
13-5s-3w Beal, Wickenhiser 1.
21-5s-1e Fee, Westheimer 5.
28-5s-1e Baptiste, Amerada Pet. 5.
Clay, Amerada Pet. 19.
34-5s-1e Ledbetter, Amerada Pet. 1.

Shut Down

19-1s-2w Morris, MaGahee 1.
27-3s-2e Brown, Home Oil 1.
16-4s-1e Bishop, Feimlee et al 1.
Rigs, 10; wells drilling, 39; total, 49.

JEFFERSON COUNTY

Rigs

33-6s-5w Seay, Gypsy Oil 9.

Wells Drilling

24-6s-5w Seay, Prairie O. & G. 5, 4.
33-6s-5w Say, Gypsy Oil 2, 5, 4, 6, 7, 8.
Seay, Hambro-Humble Oil 4, 5.
Seay, Carter Oil 1.
34-6s-5w Seay, Staley et al 1-A.
Seay, Carter Oil 4.
Indian, Humble-Hambro Oil 3, 4, 5.
29-6s-4w Reid, Mid-Cont. Pet. 1.
4-7s-5w Seay, Couche et al 1.
18-7s-5w Bshby, Gypsy Oil 1.
25-4s-6w Howard, Pure Oil 1.
21-5s-6w Cowden, Kelsey et al 1.
34-5s-4w Woodwarth, Godley Oil 1.
26-6s-6w Springer, Clark & Cowden 1.
18-6s-5w Grayson, Seaboard Oil 1.

Shut Down

34-5s-6w Major, Oasis Oil 1.
4-6s-5w Brown, Ely et al 1.
Rigs, 1; wells drilling, 26; total, 27.

MISCELLANEOUS COUNTIES

Rigs

Grant County—

23-27-3w Martin, Kay O. & G. 3.

Harper County—

30-29-22w ——, D. T. Water 1.

Woodward County—

4-23-17w Nordyke, Diamond Drig. Co. 1.

Logan County—

11-18-3w Mathews, Santrock O. & G. 1.

Texas County—

21-4n-14e ——, Wilcox O. & G. 1.

Caddo County—

1-5n-9w Funk, Cont. Diamond Core Drig. Co. 1.
6-5n-9w Culp, Briscoe & Hall 5.

Comanche County—

26-3n-10w Scheetz, Sam Wrightsman et al 1.
30-2n-9w Price, Magnolia Pet. 4, 5.
Indian, Carter Oil 1.
27-1n-10w McVicar, Consolidated Oil 1.

Tillman County—

13-1s-18w Snelling, Oasis Oil 1.

Marshall County—

10-5s-5e Griffin, W. E. Ramsey 1.
24-5s-5e Arbuckle, United 8 Oil 3.
18-5s-6e Neff, United 8 Oil 2.
30-5s-6e Marshall, United 8 Oil 1.

Love County—

12-9s-1e Gray, Smyer & Stein 1.

Wells Drilling and Shut Down

(Shut down wells indicated by *)

Alfalfa County—

8-28-12w ——, W. J. Hartley & C. W. Green 1.

Grant County—

8-27-8w Moore, Register Oil 1*.
26-27-4w Bohan, Wilson & Gloyd 1.
2-27-3w Webb, Marland Oil 1.
14-27-3w Howell, Western States Oil 1*.
22-27-3w Stewart, Western States Oil 4-A*.
Lane, Blackwell O. & G. 2.
23-27-3w Flood, Larutan Fuel Co. 1*.
27-27-3w Lane, Western States Oil 1*.
Wicke, Blackwell O. & G. 1.
23-26-3w Tabor, Lambert & Minks 1*.
22-25-4w Tallner, Cowden 2.

Ellis County—

32-24-24w Meehan, Utility O. & G. 1*.

Major County—

36-22n-14w Cheyenne Basix, Texas Prod. Co. 1*.
36-21-11w Gray, Frantz & Slick 1*.

Dewey County—

7-18-15w Chronister, Meyers 1*.

Logan County—

28-18-4w Moore, Franklin Oil Assn. 1.
33-18-3w Quier, Haley & Pioneer Pet 1*.
21-18-2w Donahue, J. L. Donahue et al 1.
28-16-1w Lair, Blackford O. & G. 1*.

Blaine County—

21-15-10w Eklemeir, Okoma Oil 1*.

Kingfisher County—

17-15-6w Creaves, Chi Oil & Nicholas 1.

Texas County—

28-3n-13e ——, Wilcox O. & G. 1.

Oklahoma County—

17-14-2w Lynn, Von Stein & Hagerling 1*.
9-14-1w Miller, Maxine Pet. 1*.
10-12-3w Edwards, Cromwell O. & G. 1.

Canadian County—

34-13-9w Dawson, Thos Revelle 1*.
5-13-8w Setter, Carroll & Zweicher 1*.
29-11-7w Sanders, O. D. Jones 1*.

Pottawatomie County—

26-11-4e Kline, Sikes, Kilgore & Shaffer 1.
3-11-6e Allenbaugh, The Texas Co. 1.
25-10-4e Midgett, Pierce Oil 1*.
24-8n-4e Stoner, Maude Oil 1*.
15-7n-4e Viens, Magnolia Pet. 1.
15-7n-4e Standridge, Darby Pet. 1.
19-7n-4e Heghan, Croxton & Bucklin et al 1.

10-6n-2e McCahey, Davis, Detrick 1*.
20-6n-4e Hibbard, Croxton-Wrightsman et al 1.
4-5n-5e Fiddler, Halmond-Osmond et al 1*.
28-10-4e Toney, Central Nat'l Oil 1*.

Cleveland County—
31-10-4w Holland, Garr Oil 1*.

Beckham County—
24-9n-25w ———, W. H. Sheldon 1.
6-9n-24w Burkholder, J. A. Pringle 1*.
4-8n-25w Roberts, Magnolia Pet. 1.
25-8n-22w McGee, W. R. Duke 1*.

Caddo County—
29-5n-12w Galbreath, W. J. Hartley 1*.
12-5n- 9w Royce, Diamond Drlg. Co. 1.

Comanche County—
33-3n-10w Hendricks, Mid-Kanssas Oil 1.
3-3n-10 Hallum, Becker et al 1.
10-2n-10w Spitler, Danciger Oil 1.
24-2n-10w Cox, Cherry & Couch 1-A.
27-2n-10w Blair, J. I. Howard 1*.
6-2n- 9w Austin, Harry Hanbury 1.
20-2n- 9w Coady, Texhoma O. & R. 1.
30-2n- 9w nDian, Westheimer & Daube 2.
Price, Magnolia Pet. 3.
Indian, Continental Oil 1.
Price, Bridwell & Heydrick 1.
29-1n-12w Bentley, Bentley et al 1*.

Jackson County—
15-1s-23w Snodgrass, J. R. Abernathy 1.

Tillman County—
33-4n-15w Dougnerty, C. & O. Drlg. Co. 1.

Atoka County—
28-2s- 9e Underwood, Wapanucka Dev. Co. 1*.
17-5s-11e Dabney, Hanson et al 1.

Marshall County—
17-5s- 5e Sacra, Kennedy Drlg. Co. 1.
24-5s- 5e Arbuckle, United 8 Oil 4.
25-5s- 5e Arbuckle, Humble O. & R. 1.
Arbuckle, Lane & Watson 1.
23-7s- 5e Haddock, Ramsey Bros. 1.

Love County—
28-6s- 2e Fee, Westheimer 1.
11-7s- 2e Wilson, Driller Synd. 1*.
13-8s- 2e Crowe, Magnolia Pet. 1.

Latimer County—
7-5n-18e Hunt, P. & F. Pet. 1.
10-6n-21e Young, J. S. Cochran 1.

Pittsburg County—
29-6n-13e Townsend, E. T. Richards 1*.
24-7n-13e Brown, J. J. Deaner 1.

Haskell County—
27-9n-18e Curry, E. D. Clark 1*.

McIntosh County—
4-10-13e Greenwood, G. F. Haun 1*.
17-10-14e Lynch, Gypsy Oil 1.
29-11-17e Scott, Western N. G. 1.

Sequoyah County—
33-11-25e Powell, Eureka Oil 1.
Rigs, 18; wells Drilling, 30; total, 98.

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Anderson	38	2,510	4	..
Butler	21	860	8	2
Chautauqua and Elk	22	641	6	2
Cowley	18	2,699	6	1
Greenwood	47	4,105	15	..
Russell	13	2,209	3	..
Miscellaneous	33	1,090	11	6
Total November	192	14,114	53	11
Total October	182	16,084	56	8
Difference	10	1,970	3	3

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	T't'l
Butler	19	40	59
Chautauqua and Elk	3	28	31
Chase	5	7	12
Cowley	11	50	61
Greenwood	35	56	91
Montgomery	..	20	20
Russell	3	16	19
Sedgwick	..	8	8
Sumner	1	12	13
Woodson	2	8	10
Miscellaneous	14	94	108
Total November	93	339	432
Total October	68	370	438
Difference	25	31	6

ANDERSON COUNTY
WELLS COMPLETED

7-21-21 Webber, Fleming & Bedford 3.. 30
8-21-21 Gadelman, Connelly & Loriaux 18 125
Gadelman, Connelly & Loriaux 19 40
5-21-21 Rosell, Southwestern Pet. 1.... 35
8-21-21 Webber, Southwestern Pet. 20.. 30
5-21-21 Croan, Harbach, Clark & Thompson 1 20
4-21-21 Rosell, McGill, Vanhorn & Denton 9 80
14-21-20 Odiadffen, Southwestern Pet. 11.. 25
16-21-20 Starett, Southwestern Pet. 25 60
Starett, Southwestern Pet. 26. 60
Starett, Southwestern Pet. 27. 90
18-21-20 Sobba, Brady & Swanson 9.... 30
16-21-20 Hunley, Brown & Rowland, Inc. 8 80
5-21-21 Rosell, Southwestern Pet. 2.... 100
Croan, Connelly & Loriaux 2. 35
8-21-21 Gadelman, Hart, Holmes & Gadelman 4 140
Badders, Connelly & Loriaux 10 150
4-21-21 Rosell, McGill, Vanhorn & Denton 10 40
14-21-20 Ewing, Peerless Oil Co. of Kan. 17 120
5-21-21 Rosell, Southwestern Pet. 3.... 15
Rosell, Southwestern Pet. 4.. dry
8-21-21 Gadelman, Connelly & Loriaux 21 105
Gadelman, Connelly & Loriaux 20 90
5-21-21 Croan, Connelly & Loriaux 3.. 275
14-21-20 Farlow, Brady & Morrison 9... 20
5-21-21 Croan, Harbach, Clark & Thompson 2 30
8-21-21 Gadelman, Hart, Holmes & Gadelman 5 175
Gadelman, Connelly & Loriaux 22 35
16-21-20 Hunley, Brown & Rowland 9... 120
9-21-20 Staritt, Southwestern Pet. 28.. 10
16-21-20 Staritt, Southwestern Pet. 29.. dry
8-21-20 Wilson, Edward Henninger 6.. 25
15-21-19 Kennedy, G. D. Whiteside 1... dry
8-21-21 Gadelman, Hart, Holmes & Gadelman 6 .... dry
5-21-21 Croan, Connelly & Loriaux 4 40
4-21-21 Rosell, McGill, Vanhorn & Denton 11 30
8-21-21 Badders, Connelly & Loriaux 11 150
Badders, Connelly & Loriaux 12 100

Wells completed 38
Production 2510
Dry 4

BUTLER COUNTY

13-24-7e Weidman, Sheldon et al 1.... dry
13-25-7e Wilson, Skelly Oil 1.... 25
10-25-5e Nuttle, Gable Franks 1.... dry
24-25-7e Jones, Liggett et al 1.... dry
29-26-8e Drum Bitler, John Rogers 3... 75
35-27-4e Skaer, Empire G. & F. Co. 12.. 50
15-28-7e Sensenbaugh, Atlantic Oil Prod Co. 1 180
30-24-8e McClellen-Fuller, Mid - Kansas Oil 1 .... dry
27-26-7e Wilhite, Brennon & Wilson 1.. 165
25-27-4e Skaer, Magnolia Pet. 1.... 25
29-26-8e Drum Bitler, John Rogers 9.. 250
22-27-7e Harris, Mid-Kansas Oil 1.... 20
4-24-8e Harsh, Hayes, Robertson & Greenland 1 .... dry
29-26-8e Drum Bitler, Federal Oil 3... 75
36-27-6e Figge, Liggett et al 1.... dry
18-27-7e Lill, Lewis Oil 2.... gas
23-27-7e Barnhill, Flack, Davidson et al 1 .... dry
20-25-5e Finney, Empire G. & F. Co. 27 gas
Atkins et al, Empire G. & F. 34 15
Atkins et al, Empire G. & F. 35 40
23-26-6e Blankenship, Neely O. & G. Co. 1 .... dry

Wells completed 21
Production 860
Dry 8
Gas 2
Gas production 9,500,000

CHAUTAUQUA AND ELK COUNTIES

16-32-12 White, Southwestern Gas Co. 5 gas
16-33-9e Hanby, Orlando Pet. 1.... dry
35-29-12 Steel, Theta Oil 1.... dry
25-30-10 Segler, Pennock Oil 1.... dry
23-31-10 Webb, Theta Oil 1.... 50
10-34-9e Fisher, T. B. Slick 3.... 10
16-34-9e Kinman, J. A. Brouck et al 1 5
3-30-9e Tate, Conley et al 4.... 90
22-31-10 Rorick, Gillespie Oil 3.... 15
14-31-10 Chaffine, Pure Oil 7.... 100
Leffingwell, Southwestern Gas 4 50
26-31-10 Waller, Theta Oil 1.... 25
27-31-10 Walker, Theta Oil 1.... 25
22-33-11 Gregg, Prairie O. & G. .32.... dry
22-34-11 Fee, C. O. Ross 22.... 40
21-29-9e ———, Winona Oil 3.... 50
———, J. W. Mellars 3.... dry
33-34-10 Cockins, Big Bros. O. & G. 3 6
3-30-9e Denton, Denton et al 1.... 75
Mullendore "B," C. A. Conley 2 100
35-33-10 Moffitt Bros. & Anderson, Andrew Benson et al 1.... dry
34-34-12 Hillman, Ludowici-Celadon 6.. gas

Wells completed 22
Production 641
Dry 6
Gas 2
Gas production 2,500,000

COWLEY COUNTY

10-31-8e Smith, Trees Oil 3.... s0
16-33-3e Thurlow, W. Phillips & Marland 5 385
21-33-3e Nelson, W. Phillips & Marland 12 450
Snyder, W. Phillips & Marland 4 250
33-30-7e Stuart, Miller-Hershey et al 1 dry
19-32-5e Cavit, Duffield et al .... gas
21-33-3e Nelson, W. Phillips & Marland 10 377
10-30-4e Horoday, Shawver & Sutter 1.. dry
19-32-3e Carson "B," T. B. Slick 2.... 50
20-32-3e Carson, T. B. Slick 1.... 50
19-32-5e Bartlow, J. A. Hull 2.... dry
16.30-8e Bartlow, Patterson & Crosby 1 dry
24-30-6e Ward, Chas. Christy 1.... dry
6-31-6e Eastman, Southwestern Pet. 9. 20
24-32-4e Wallace, J. A. Hull 13.... dry
21-33-3e Nelson, W. Phillips & Marland 13 477
Nelson, W. Phillips & Marland 15 570
4-33-7e Countryman, Forrester et al 1 25

Wells completed 18
Production 2,699
Dry 6
Gas 1
Gas production 500,000

GREENWOOD COUNTY

8-22-10 Pixlee, Theta Oil 4.... 200
24-23-8e Scott, Empire G. & F. 3.... 150
11-23-9e Green, Sheedy et al 6.... 200
20-23-9e Hemple, Phillips Pet. 3.... 90
16-23-10 Hollis, Mission Oil 1.... 5
19-23-8e Ladd, Mid-Kansas Oil 3.... 250
17-22-10 Browning, Theta Oil 13.... dry
29-22-10 Prather, Titus et al 5.... 150
Prather, Titus et al 16.... 150
9-22-11 Minyot, Ritchey & Moore 1... dry
11-22-11 Kipfer, Empire G. & F. 7.... 550
Kipfer, Empire G. & F. 8.... 185
15-22-11 Greenwood, Empire G. & F. 1 dry
34-22-13 Craft, Braden Bros. et al 4... dry
25-23-8e Scott, Robertson, Hayes et al 7 300
22-23-9e Teter, Davis, Hazlett et al 1. 40
30-24-11 Wiggins, McGinnis et al 2.... 20
20-25-9e Ladd, Mid-Kansas Oil 5.... 40
30-22-10 Prather, Phillips Pet. 2.... 150
1-22-11 Vorhees, Pebble O. & G. 2.... dry
7-22-11 De Malorie-Souder, White Eagle O. & R. 2.... dry
20-23-9e Morris-Phillips, Phillips Pet. and Skelly 3 25
31-23-10 Martindale, Mid-Kanssas Oil 2.. 75
3-25-10 Hammond, Abel et al 1.... dry
14-26-11 Jackson, Smith Ash et al 1... dry
30-23-9e Dales, Prairie O. & G. 1.... dry
16-24-13 Blackwell, Prairie O. & G. 2.. 65
13-22-10 Warrensburg, Skelly Oil 3.... dry
20-22-10 Browning, Sinclair Oil 28.... 50
30-22-11 Coffman, Phillips Pet. 2.... 175
33-22-11 Braden-Hillard, Phillips Pet. 6 45
Hillard, Phillips Pet. 3.... 75
36-23-8e Burk, Sinclair Oil 1.... dry
10-23-9e Green, Greenland Oil 17.... 250
Green, Greenland Oil 18.... 150
15-23-9e Green, Skelly Oil 1.... 125
19-23-9e Morris, Mission Oil 4.... 200
Morris, Mission Oil 5.... 160
36-23-9e Teter, Darby & Simmons 3.... 90
8-23-11 Oliver, Pure Oil 2.... 45
9-23-11 Tiffany, Simmons 2.... dry
23-24-9e Moore, Mission Oil 1.... 45
5-24-10 Parks, The Texas Co. 1.... dry
29-24-12 Short, Parrish et al 1.... dry
19-25-9e Ladd, Mid-Kansas Oil 3.... 75
1-26-9e Edwards, Flintridge Pet. 1... dry
33-26-9e Miles Est., Flint Ridge Oil 1.. 35

Wells completed 47
Production 4,105
Dry 15

RUSSELL COUNTY

5-12-15w Kollman, Muddy Oil 2.... dry
Kollman, Muddy Oil 3.... 285
Sutton, Derby Oil et al 8.... dry
Sutton, Valerius O. & G. 5... 200
Kollman, Tom Johnson 3.... 285
Brummitt, Carter Oil 1.... 190
8-12-15w Oswald, Streeter & Stearns 6. 190
5-12-15w Kollman, Cassoday Oil 1... 50
8-12-15w Oswald, Mid-West Ref. 4... 234
5-12-15w Kollman, Cassoday Oil 2.... 150
6-12-15w Tischer, Carter Oil 1.... dry
8-12-15w Oswald, Mid-West Ref. 1.... 450
Oswald, Mid-West Ref. 3.... 175

Wells completed 13
Production 2209
Dry 3

MISCELLANEOUS COUNTIES

Chase County—
19-21-8e Kirk, Ark. Fuel Oil Co. 1.... dry
35-22-9e Shambaugh, White & Huff 4.. 75
36-22-9e Shambaugh, Mid-Kansas Oil 1. 20
Shambaugh, W. Phillips Co. 1. dry

Lyon County—
31-20-11 Price, Ritchey & Moore 1.... dry
25-21-10 Bradford, R. W. Talbot 1.... 300
33-21-12 Lauk, Phillips Pet. 1.... 150
16-21-10 Jones, Loy & Chaney 1.... dry

Marion County—
17-21-4e Reamy, National Ref. Co. 13.. 106
24-21-4e Allison, Sheedy et al 2.... 150
15-20-5e Robinson, Miss. Valley Oil 1.. gas

Labette County—
3-33-17 Bellairs, Labette Co. O. & G. 1 3

Sedgwick County—
32-29-2w Nickerson, W. Phillips 1.... dry

Neosho County—
23-27-18 Rush, H. Krueger 4.... 2
15-28-18 Bell, E. W. Moore et al 1.... dry
19-28-20 Meady, Binghampton O. & G. 1 10

Wilson County—
12-28-13 Mobley, Wiser Oil 1.... gas
33.30-15 Long, Prairie O. & G. Co. 15.. gas

Bourbon County—
4-25-22 Ward, Ben Kiser et al 1.... dry

Montgomery County—
16-34-15 Dobson, Strauce & Lillie Strand 1 .... dry
5-35-14 Thomas, Chas. D. Shukers Jr. 3 dry
3-35-14 Perry. O. H. Parkening et al 1 dry
32-34-14 Freedine, Dukee Rogers et al 1 dry
4-33-17 Murphy, Coffeyville Brick Co. 1 30
Coleman, Coffeyville Brick Co. 1 100
Murphy, Coffeyville Brick Co. 2 30
15-34-15 Adams, Standard Oil Co. 18... 60
12-35-16 Fee, W. P. Brown 3.... gas
13-34-15 Grass, O. O. Crane 9.... gas
13-35-16 Shockman, W. P. Brown 1... gas
31-32-16 Hays, Williams O. & G. Co. 20 5

Allen County—
23-25-20 Fee, O. E. Holland 1.... 10
16-23-18 Kinitt, Thos. R. Bucher 10... 45

Wells completed 33
Production 1,090
Dry 11
Gas 6
Gas production 11,525,000

BUTLER COUNTY
Rigs

7-23-8e Flint, Donnelly et al 1
32-23-8e Harsh, Skelly Oil 1.
13-25-3e Wilson, Skelly Oil 2.
14-25-3e Drohen, Skelly Oil 1.
32-26-6e Schriver, Forsker Oil 1.
Schenrock, Mason & Ralston 2.
27-26-7e Wilhite, Brennon, Wixon et al 2.
Wilhite, Phillips Pet. 1.
Wilhite, White Eagle O. & R. 1.
29-26-8e Drum Bitler, Federal Oil 8.
25-27-4e Skaer, Magnolia Pet. 2.
35-27-4e Skaer, Empire G. & F. 13.
33-27-5e Clark, Reynolds et al 1.
22-27-7e Barnhill, Sinclair Oil 1.
27-27-7e Truesdale, Phillips Pet. 1.
28-27-7e Jobe, Greenland Oil 1.
33-27-7e Laughton, John Rogers 1.
9-28-7e Lemon, John Herron et al 1.
22-28-7e Nelson, Mid-Kansas Oil 1.

Wells Drilling

1-24-3e Joseph, Vickers Pet. 1.
19-25-5e Pirtle, Fleeger et al 9.
19-26-5e Houston, Empire G. & F. 14.
16-26-7e Carson, Liggett et al 1.
28-26-7e Huntley, Brennon, Wixon et al 1
29-26-8e Drum Bitler, Federal Oil 4, 5, 6, 7.
Drum Bitler, John Rogers 10.
30-26-8e Drum Bitler, Cowpuncher Oil 1.
31-26-8e Drum Bitler, Miller et al 1.
25-27-5e Sipe, Hartman & Skaer 1.
16-27-6e Blankenship, Phillips Pet. 1.
19-27-6e Bollner, Hoyt et al 7.
7-27-7e Seward, Ray et al 1.
22-27-7e Tobler, Amerada Pet. 1.
34-27-7e Drum, Greenland Oil 1.
6-27-8e Lucas, John Rogers 4.
7-27-8e Nichols, Connell et al 1.
25-28-6e Tavender, White Eagle O. & R. 1.
6-28-7e Farner, Sheldon, Howard et al 1.
11-28-7e Hurt, Basom, Boyle et al 1.
12-29-6e Lamenyon, Tobins et al 1.

Shut Down

14-23-7e De Ford, Ramsey et al 1.
19-23-8e Sturgeon, Tom Miller et al 1.
31-23-8e Walkins, Greenland Oil et al 1.
36-24-4e Barkmeyer, Robinson et al 1.
20-24-8e Henley, White Eagle et al 1.
20-25-5e Atkins, Empire G. & F. 33.
12-26-6e Frank Allen & Steiner 1.
9-26-6e Fuller, Polhamus & Smith 1.
32-26-6e Palmer, Sparta Drilling Co. 1.
29-26-8e Drum Bitler, John Rogers 3.
24-27-4e Weidline, Weidline et al 1.
5-27-6e Beedles, Branson et al 1.
22-27-6e Stearns, Wentz et al 1.
22-28-6e Pettett, John Sharp 1.
1-28-7e Simpson, Balliere et al 1.
16-28-7e Dunn, Allen et al 1.
Rigs, 19; wells drilling, 40; total, 59.

CHAUTAUQUA AND ELK COUNTIES
Rigs

20-32-10 Gibson, Watchorn O. & G. 1.
30-30-10 Snodgrass, Tidal-Osage Oil 2.
28-31-10 Johns, Landon et al 1.

Wells Drilling

12-29-8e Porter, Roth & Co. 12.
13-29-8e Porter, Empire G. & F. 4.
35-29-9e Parkins, Barber & Lemon 1.
17-29-10 Taylor, Elk County Pet. 1.
3-30-9e Tate, Conley et al 5.
3-30-9e Mullendore, W. A. Reed 2.
Denton, Watchorn O. & G. 8.
16-31-9e Longston, Anderson Bros. 2.
Stiles, Anderson Bros. 1.
14-31-10 Webb, Southwestern Gas 10.
22-31-10 Rorick, Gillespie 4, 5.
23-31-10 Webb, Empire G. & F. 1.
Webb, Theta Oil 3.
25-31-10 Kay, Frazier et al 1.
27-31-10 Walker, Theta Oil 2, 3.
29-31-10 Johns, Neeley O. & G. 1.
22-31-11 Finley, Abel, Byington et al 3.
15-32-10 Hazelton, Manning, Street et al 1.
31-32-10 McKown, Blackwell O. & G. 1.
24-33-9e Anderson, Manfru et al 1.

Shut Down

5-33-10 Humphres, Dunn et al 1.
7-33-10 Briggs, Noble O. & G. 1.
5-33-12 Fish, Garner et al 1.
28-28-11 Gibson, Sharpless et al 1.
4-29-9e Britton, McCullough & Talbot 1.
31-30-10 Cummings, Indian Territory Ill. Oil 1.
Rigs, 3; wells drilling, 28; total, 31.

CHASE COUNTY
Rigs

25-21-9e Atyac, Dingee, Pryor & Lockhart 1.
29-22-8e Bradley, White Eagle & Connell 1.
19-21-6e Griffith, Liggett et al 1.
35-22-9e Shambaugh, White & Huff 3.
36-22-9e Shambaugh, Mid-Kansas Oil 2.

Wells Drilling

32-18-7e Lipps Preston & Pasewalk 1.
35-22-8e Crowley, Davis, Hazlett et al 1.
23-22-9e Crosby, Dingee, Callahan et al 1.
35-22-9e Shambaugh, Selby O. & G. 4, 5.

Shut Down

19-19-8e Holsinger, Alters et al 1.
13-20-8e Brant, Ward et al 1.
Rigs, 5; wells drilling, 7; total, 12.

COWLEY COUNTY
Rigs

10-31-3e Smith, Trees Oil 4.
Shaffer, Benedum & Trees 5.
11-31-3e Clark, Ark. Fuel Oil 2.
21-31-4e Goodrich, Twin State Oil 1.
5-31-6e Eastman "A," Empire G. & F. 2.
7-32-5e Crosby, Ark. Fuel Oil 5.
30-32-5e Carlisle, Lewis Oil 1.
21-33-3e Enyder, W. Phillips & Marland 2.
28-33-3e Wyckoff, Gypsy Oil 1.
7-33-7e Riding, Brown Bros. 1.
24-34-6e Day, S. H. E. Pet. 1.

Wells Drilling

31-30-6e Robbins, Lewis Oil 7.
32-30-6e Knollenberg, Titus et al 1.
21-31-4e Waite, Derby Oil 1.
28-31-4e Emery, Trees Oil 2.
20-31-5e Sycles, Roth & Farout 1.
19-32-3e Waite, Carter Oil 7, 8.
Waite "B," T. B. Slick 1.
Carson, T. B. Slick 6.
28-32-3e Hoverstock, Miss. Valley Oil 1.
29-32-3e Kellogg, Wentz et al 1.
25-32-4e McFadden, Buckeye Oil 1, 2.
6-32-5e Dudgeon, Ark. Fuel Oil 2.
19-32-5e Boyd "A," Duffield et al 1.
Zelon, Mummert Drilling 1.
16-33-3e Hunt, Gypsy Oil 1.
17-33-3e Thurlow, W. Phillips & Marland 6, 7.
19-33-3e Holman, Marland Oil 2.
Heskett, Slick & Marland 3.
21-33-3e Nelson, W. Phillips and Marland 11, 16, 17.
Nelson 1, W. Phillips and Marland 1, 2, 3.
Bryan, W. Phillips and Marland 1, 2.
W. Snyer, W. Phillips and Marland 5, 6.
Hunt, Marland Oil 2.
Hunt, Derby Oil 1.
11-33-4e Beard, White Eagle et al 1.
16-33-6e Bain, Terrell et al 1.
24-33-6e Sandstrum, Little Martha O. & G. 2.
6-33-8e Shaffer, Phillips Pet. 1.
17-34-3e Chenoweth, Elwell et al 1.
22-34-3e Kimmell, Roxana Pet. 1.
7-35-3e Vickery, Roxana Pet. 1.
16-35-4e Hollingsworth, Muddy Oil 1.

Shut Down

20-30-4e Erickson, Ark. Fuel Oil 1.
7-30-6e White, Branson et al 1.
14-30-6e Hulmes, Gray, Hewey et al 1.
4-31-5e Elliott, Boxer et al 1.
8-31-6e Stout, Dean et al 3.
29-32-7e Bronson, W. H. Hammill 1.
15-34-4e Pollock, Bunnell et al 1.
7-34-8e Sawer, McKnab et al 1.
5-35-5e Sterling, Springstead & Overlease 1.
Rigs, 11; wells drilling, 50; total, 61.

GREENWOOD COUNTY
Rigs

6-22-10 Atyee, Empire G. & F. 1.
8-22-10 Pixlee, Theta Oil 5.
16-22-10 Bunk, Rhodes, Abel et al 1.
20-22-10 Browning, Sinclair Oil 32.
29-22-10 Prather, Titus et al 10.
30-22-10 Browning, Titus et al 2.
16-22-11 Kipfer, Empire G. & F. 10.
12-22-11 Voorheees, Empire G. & F. 2.
14-22-11 Duby, Empire G. & F. 3.
30-22- 1 Coffman, Pryor & Lockhart 2.
24-23-8e Scott, Empire G. & F. 7, 8.
25-23-8e Scott, Robertson, Hayes et al 9.
26-23-8e Mosby, Phillips Pet. 1.
2-23-9e Shambaugh, Greenland Oil 5, 7.
10-23-9e Green, Greenland Oil 16, 19.
16-23-9e Teter, Empire G. & F. 30.
19-23-9e Morris, Mission Oil 6.
Norman, Phillips Pet. 2, 7, 8.
36-23-9e Teter, Darby & Simmons 4.
14-23-10 Winegar, Connell et al 1.
31-23-10 Martindale, Mid-Kansas Oil 33.
1-24-9e Cipfer, Wright, Roth & Mission 10.
6-24-11 Freeman, Hubbard et al 1.
26-24-11 Johnson, McGinnis et al 1.
30-24-11 Wiggins, McGinnis 1.
18-24-12 Scott, Stark et al 1.
26-24-12 Hughes, Foster Oil 2.
23-26-9e Weirshing, Miller et al 1.
24-26-9e Weirshing, Beacon Oil 3.
28-26-13 Ingersoll, Maitland Oil 1.

Wells Drilling

12-22-10 De Malorie, Davis, Hazlett et al 8.
20-22-10 Browning, Sinclair Oil 29, 30, 31.
29-22-10 Prather, The Texas Co. 2.
32-22-10 Rennard, The Texas Co. 1.
11-22-11 Kipfer, Tidal Oil 6.
15-22-11 Bartlett, Empire G. & F. 3.
Pees, Empire G. & F. 5.
19-22-11 Greenwood, Simmons et al 2.
24-23-8e Scott, Empire G. & F. 6.
25-23-8e Taylor, Greenland Oil 2.
Dales "D," Mission Oil 2, 3.
Scott, Robertson, Hayes et al 8.
1-23-9e Skelly-Shambaugh, Skelly Oil 1.
2-23-9e Shambaugh "B," Greenland Oil 6.
3-23-9e Noler, Phillips Pet. 3.
15-23-9e Skelly-Teter, Empire G. & F. 2.
16-23-9e Teter, Empire G. & F. 29.
19-23-9e Morris, Empire G. & F. 1.
Morris, Phillips Pet. 3, 4, 5, 6.

Morris, White Eagle and McGinnis 2, 3, 4.
20-23-9e Cane, Phillips Pet. 1.
21-23-9e Teter, Minnehoma Oil 2.
9-23-10 Slaughton, Roth & Farout 1.
18-23-10 Spain, White Eagle O. & R. 1.
22-23-10 Scott "A," Roth, Farout & Mission 3.
27-23-10 Thrall "B," Roth & Mission Oil 3.
27-24-9e Hill, Fontain et al 1.
Wiggins, Polhamus et al 3.
23-24-10 Edwards, John Edwards et al 1.
19-24-11 Freeman, Paul Smith et al 1.
7-24-12 Scott, Foster et al 1.
12-25-8e Welsh, Lassen et al 3.
Birkett, Roth & Farout 7.
10-25-9e Robbins, Cruzen & Parker 1.
24-26-9e Weirshing, Beacon Oil 2.
Weirshing, Miller et al 1.
26-26-9e Porter, Commant Oil 1.
16-27-9e Baldwin, Roth & Farout 1.
Shut Down
12-22-11 De Malorie "C," York State Oil 5.
35-22-11 Westcott, York State Oil 7.
22-23-12 Noll, McGinnis & Parrish 1.
1-24-9e Marshall, Ark. Fuel Oil 14.
21-24-11 Warner, Peerless Oil et al 1.
27-25-11 Wilson, Cross Oil 1.
5-25-1e Gilroy, Lewis, Sandow et al 1.
25-26-9e Duke, Smith, Carlson & Marshall 2.
9-26-11 Wilson, Moore et al 1.
8-27-10 Neibrach, Morgan et al 1.
Rigs, 35; wells drilling, 56; total, 91.

RUSSELL COUNTY

Rigs
8-12-15w Oswald, Mid-West Ref. 21, 24.
18-12-15w Ed Oswald, Skelly Oil 3.
Wells Drilling
13-11-13w Pospishal, Krueger et al 1.
19-11-15w Dodge, Link Syndicate 1.
28-11-15w Abbott, Mid-West Ref. 31.
23-11-15w Booth, Snowden & McSweeney 1.
5-12-15w Sutton, Streeter, Stearns & Yankey 9.
Kollman, Tom Johnson 4, 5.
Sutton, Valerius O. & G. 6, 7.
7-12-15w Oswald-Valerius, Valerius O. & G. 8.
8-12-15w Oswald, Mid-West Ref. 6, 22.
Oswald-Valerius, Valerius O. & G. 11.
17-12-15w Oswald-Valerius, Valerius O. & G. 10.
30-12-15w Austin, Mid-West Ref. 1.
Shut Down
22-12-11w Dick, Ritchey & Moore 1.
Rigs, 3; wells drilling, 16; total, 19.

MONTGOMERY COUNTY

Wells Drilling
23-33-14 Miller, Morgan et al 1.
11-33-16 Zutz, Wilkins et al 1.
30-33-16 Davis, Welble et al 1.
9-34-14 Eaton, Gillespie 1.
28-34-14 Owens, Phillips Pet. 1.
31-34-15 Reed, Connell et al 1.
5-35-15 Taylor, Keystone Oil 1.
12-35-16 Wilson, Tex-O-Kan Oil 1.
Shut Down
31-31-14 Faler, Ramler et al 1.
21-32-13 Neiman, Dunn et al 1.
36-32-14 Dryhead, Irish et al 1.
5-32-16 Brinkman, Cowell 1.
35-32-16 Wyberger, Bloom et al 1.
29-32-17 Hellum, Earl & Overfield 1.
12-33-16 Painter, Superior Oil 1.
35-33-16 Felts, Voice & Tabor 1.
4-33-17 Hall, Townsell et al 1.
30-33-17 Bunk, Brown & Wolf 1.
1-35-16 City of Coffeyville, Ed Kerns 1.
4-35-17 Walker, Gallowye & Roberts 1.
Wells drilling, 20; total, 20.

SEDGWICK COUNTY

Wells Drilling
7-26-2e Mills, Lamson et al 1.
17-29-1e Howell, Carr Hartman & Skaer 1.
21-29-3w Webb, Allison & Fitzwilliams 1.
Shut Down
6-25-1e Poff, Boyle, Preston & Tack 1.
9-25-2e Harrison, Smith & Keller 1.
34-26-1e Jaden, Wichita O. & G. 1.
19-29-1w Duncan, Curtis et al 1.
3-29-2e Fleming, Higgins 1.
Wells drilling, 8; total, 8.

SUMNER COUNTY

Rig
27-34-2e Morris, Marland Oil 1.
Wells Drilling
9-30-1w Stevenson, Champlin Ref. 1.
12-30-1e Waggoner, McKanna et al 1.
8-30-2w Lotta, Champlin Ref. 1.
36-30-2w Riner, Cosden O. & G. 1.
17-32-2w Miller, Roxana and W. Phillips 1.
24-32-2w Conrad, Slick et al 1.
24-33-2e Holman, Marland Oil 1.
Holt, Phillips Pet. 1.
4-34-1w Welcher, Cosden Oil 1.
35-34-1w Roselle, Shawver et al 1.
Shut Down
35-31-4w Stewart, Sparta Drilling 1.
21-33-3e Rutter, Roxana Pet. 1.
Rig, 1; wells drilling, 12; total, 13.

WOODSON COUNTY

Rigs
6-25-14 Harville, Peashe et al 1.
28-25-15 Pengrey, Powell et al 1.
Well Drilling
33-23-14 Headley, Iowa-Kansas Dev. 1.
Shut Down
14-25-13 Mason, McCann & Johnson 1.
9-25-14 O'Neil, Fields et al 1.
13-25-14 Hunt, Alters et al 1.
4-26-14 Louder, Hesman & Oglesby 1.
13-26-14 Daniels, Burford & Brimm 1.
14-26-14 Underwood, Brinegan et al 1.
29-26-17 Clark, Equity Oil 1.
Rigs, 2; wells drilling, 8; total, 10.

MISCELLANEOUS COUNTIES

Rigs
Coffey County—
29-19-16 McFadden, Burge et al 1.
Comanche County—
23-31-18w Starlock, I. M. Rupard et al 1.
Graham County—
17-10-24w Baker, Gruin & Shiler 1.
Lyon County—
23-21-12 Lauck, Phillips Pet. 2, 3.
McPherson County—
3-18-2w Anderson, Young et al 1.
Marion County—
8-19-4e Troup, Troup et al 1.
29-19-5e Collings, Frank Allen et al 1.
Morris County—
32-14-7e Barber, Kline et al 1.
Ness County—
35-16-21w Ryersee, Bell & Sarton 1.
Pottawatomie County—
17-9-12 Stewart, Crawford et al 1.
31-9-12 Bratchbar, Crawford et al 1.
Rice County—
2-19-10w Hollscher, Sparta Drilling Co. 1.
Wilson County—
7-28-14 Hamon, O. W. Culp et al 1.
Wells Drilling and Shut Down
(Shut down wells indicated by *)
Barber County—
14-34-11w Martin, B, B. Brown et al 1.
Barton County—
31-18-12w Taul, Haynes & Taul 1*.
22-18-13w Everleigh, John Herron 1.
17-19-11w Smith, Huffine et al 1*.
Clark County—
20-32-21w Morrison, Watchorn O. & G. 1.
Clay County—
32-9-4e Fleming, Boggess et al 1.
Cloud County—
6-6-4w Murdock, Concordia O. P. 1*.
Coffey County—
9-20-14 Jones, W. R. Wilson 1*.
Dickerson County—
12-14-1e Engle, Marland Oil et al 1.
Edwards County—
7-23-19w Moberwell, Edwards County Pet. 1*.
Ellis County—
16-11-17w Bemis, Sparks et al 1.
14-13-18w Unrein, Ellis County Pet. 1*.
33-15-20w Murphy, Faler et al 1.
Ellsworth County—
24-14-7w Walker, United Pet. 1*.
6-14-9e Kasper, John Herron et al 1*.
Franklin County—
17-16-10 Owens, Smith, Thrice & Fisher 1*.
Geary County—
18-11-5e Stinford, Kirby & Wright 1*.
9-12-6e Wright, Liberty Texas Oil 1*.
30-13-6e Foster, Liberty Texas Oil 1*.
Graham County—
23-8-24w Taxon, Keys Bros. and Marine 1.
27-8-25w St. Johns, Gulf Coast Drlg. Co. 1.
Harper County—
19-32-5w Burk, Berry Pet. 1*.
Harvey County—
27-22-2e Symons, S. A. Hunter 1*.
4-23-2e Brandweide, Wentworth Bros. 1*.
Hodgeman County—
19-21-22w Frizzell, Spencer & Marconnette 1.
Jefferson County—
13-9-19 Edwards, Northern Counties 1*.
Kingman County—
16-27-7w Richards, Fleeger & Carter Oil 2.
22-29-6w Bane, Phillips Pet. 1.
4-30-6w Richards, Ozark Drilling 1.
Labette County—
14-31-17 Sparks, Ark. Fuel Oil 1*.
26-32-17 Wilks, Ark. Fuel Oil 1*.
1-32-20 Thurman, Noble O. & G. 1*.
33-32-20 Burnes, W. C. Willy et al 1*.
1-33-17 Hornbeck, Cowell et al 1*.
5-35-20 Lipps, Wantland et al 1*.
Lane County—
11-18-27w Dickinson, Richards Ref. 1.
Lincoln County—
19-11-6w Stone, Scott & Collins 1*.
22-11-6w Lewis, Pope & Powell 1*.
36-13-7e Paul, United Pet. 1*.
Logan County—
14-14-33w Moffett, Coone et al 1.
Lyon County—
30-21-10 Jones, Transcontinental Oil 1.
32-21-10 Atyee, Southwestern Pet. 1.
34-21-10 Pixlee, Ritchey & Moore 1.
36-21-11 Soule, Swartz et al 1.
32-21-12 Perdroja, Phillips Pet. 1.
33-21-12 McIlvane, Phillips Pet. 2.
Swartz, Phillips Pet. 1.
McPherson County—
3-17-2w Anderson, Wynn et al 1*.
29-18-2w Anderson, Waugh & Casey 1*.
1-19-5w Erickson, Transcontinental Oil 1*.
Marion County—
22-18-5e Svoboda, Empire G. & F. 1*.
31-20-5e Robinson, Brennon & Wilson 1.
14-21-4e Coyne, Connell et al 1.
32-21-4e Equity, Morgan et al 1*.
5-22-4e Townsend, Watchorn O. & G. 42.
8-22-4e Speir, John Markham 6.
Mitchell County—
10-/-10 Kyle, Marland Oil 1.
Morris County—
21-17-7e Welcher, Bowmand & Jones 1*.
24-17-9e Cessman, Rock Creek O. & G. 1*.
Nemaha County—
19-3-11e Myers, Nemaha O. & G. 1*.
Osborn County—
10-7-12e Turner, H. A. Beasley 1*.
9-10-14e Beeley, Knight et al 1*.
Osage County—
3-15-15e Lease, Baker et al 1*.
27-15-16 Bailey, West et al 1*.
8-17-17 Neil Est., Mull Vit Dev. Co. 1*.
Phillips County—
13-5-18w McKinley, Hood & Crane 1*.
15-5-18w McQueen, Curtis & Frost 1.
Pottawatomie County—
11-10-12 St. Mary, Crawford et al 1*.
Reno County—
10-23-4w Magnuson, Sheldon et al 1*.
5-26-4w Williams, Travis et al 1*.
7-26-7w Stevins, Frank Hopper et al 1*.
Rice County—
10-18-6w Walker, Jasper & Beschka 1*.
1-19-7w Deeds, Pryor & Lockhart 1*.
22-20-6w Barnes, Stamey et al 1*.
26-20-6w Johnson, Midland Oil 1*.
35-20-6w Welch, Hipple et al 1.
2-21-6e Walstein, Youker et al 1.
Riley County—
26-10-6e Marks, Pawnee O. & G. 1.
20-10-7e Treirer, Youker & Douglas 1*.
Rooks County—
7- 8-20w Saindon, Keys Pet. 1*.
25-10-10w Minx, Findless et al 1.
Rush County—
10-18-16w Moore, Morgan & Downing 1*.
Saline County—
29-14-2w Davis, L. S. Johnson 1*.
26-15-2w Shallon, Brown & Woodward 1*.
15-15-4w Holquest, Thrall et al 1*.
Stafford County—
23-21-11w Sifers, King & Lanston 1*.
24-22-11w Richardson, Randall & Johnson 1*.
Trego County—
5-11-25w Walsh, Keys Pet. 1*, 2*.
Wabaunsee County—
2-11-11 Kaul, Ramsey Pet. 1.
15-13-12 Henderson, Williams et al 1*.
Wilson County—
22-28-13 Thompson, Price et al 1*.
29-30-17e Smally, West & Williams 1*.
20-30-16 Benedict, Prairie O. & G. 17.
Rigs, 14; wells drilling, 94; total, 108.

NORTH CENTRAL TEXAS

Summary of Wells Completed

District—	Comp.	Prod.	Dry	Gas
Wichita	42	660	18	0
Wilbarger	29	6,050	7	0
Archer	102	5,610	39	0
Young	31	1,365	18	0
Stephens	12	515	6	3
Eastland	14	650	3	2
Brown	7	610	2	0
Reagan	8	4,555	1	0
Wildcats	69	2,895	32	6
Total Nov.	315	22,810	126	11
Total Oct.	399	32,265	146	11
Difference	84	9,455	20	0

Summary of New Work

District—	Rigs	Drg.	Ttl.
Wichita	6	22	28
Wilbarger	10	73	83
Archer	7	56	63
Young	1	26	27
Stephens	4	35	39
Eastland	2	12	14
Brown	4	14	18
Reagan	2	14	17
Wildcats	22	135	157
Total Nov.	59	407	466
Total Oct.	90	376	466
Difference	31	31	0

WICHITA COUNTY

Wells Completed

Reilly, Magnolia Pet. Co. 115 ..... dry
Roller, Robinson et al 16 25
Jennings, Apple et al 14-A 15
Waggoner Bros., Hammon et al 2 25
Waggoner Bros., Hammond et al 2 ..... dry
Maer, Magnolia Pet. Co. 23 15
Maer, Magnolia Pet. Co. 27 30
Waggoner Bros., Texhoma Oil & Ref. Co. 6 10
Daume, Wolfe et al 1 15
Wren, Gallagher et al 1 ..... dry
Chilson, Perkins et al 1 ..... dry
Roller, Robinson et al 17 ..... dry
Jennings, Bullington et al 9 35
Jennings, Dale Oil Corp. 16 25
Waggoner, Hammon et al 3 50
Taylor, Hawkins et al 1 ..... dry
Munger, K. M. A. Oil Co. 21 25
Waggoner, Kruger et al 2 ..... dry
Nance, Ryan Pet. Co. 42 45
Allen & Kemp, Texhoma Oil & Ref. Co. 1 ..... dry
Waggoner, Texhoma Oil & Ref. Co. 7.. 50
Waggoner, Texhoma Oil & Ref. Co. 8.. 15
Coleman, Tolbert Oil Co. 18 ..... dry
Coleman, Tolbert Oil Co. 19 5
Coleman, Tolbert Oil Co. 20 5
Potter, Bridwell et al 1 ..... dry
Ramming, Magnolia Pet. Co. 9 5
Foster, Burk-Cameron Co. 12 30
Douglas, C. & R. Production Co. 1..... dry
Kemp & Kempner, Kimmel et al 12..... dry
Maer, Magnolia Pet. Co. 29 10
Bishop, O'Donohoe et al 1..... dry
Nance, Ryan Pet. Co. 43 60
Nance, Ryan Pet. Co. 44 15
Nance, Ryan Pet. Co. 45 ..... dry
Pace, Underwood et al 6 ..... dry
Bashara, Consolidated Oil Co. 1 ..... dry
Jennings, Apple et al 5-B 40
Jennings, Bullington et al 8 40
Burnett, Hammond et al 2 45
Pratt, O'Donohoe et al 1 25
Munger, Waggoner et al 15 ..... dry
Old, White Bros. 1 ..... dry

Wells completed 43
Production 660
Dry 18

WILBARGER COUNTY

Stephens, Barkley et al 4-A 400
Stephens, Barkley et al 1-B 20
Dill, Bridwell et al 11 180
Rutledge, Giles et al 1 ..... dry
Castlebury, Humble Oil & Ref. Co. 19.. 75
Stephens, Humble Oil & Ref. Co. 25.. 250
Stephens, Humble Oil & Ref. Co. 35.. 125
Waggoner, Landreth Production Co. 1-I 65
Stephens, McCamey et al 7 600
Stephens, McCamey et al 9 250
Waggoner, Murchison et al 2-D ..... dry
Dill, Petroleum Producers Co. 1-A..... 10
Stephens, Staley et al 5 1000
Stephens, Staley et al 7 900
Bond, Winnipeg Oil Co. 2-B 75
Stephens, Barkley et al 3-A 800
Waggoner, Consolidated Oil Co. 1 (Section 2) ..... dry
Waggoner, Humble Oil & Ref. Co. 2-D.. dry
Waggoner, Kolp et al 9 70
Stephens, McCamey et al 13 370
Stephens, McCamey et al 23 700
Waggoner, Texas Co. 304 20
Waggoner, Kolp et al 4-A 30
Waggoner, Landreth Production Co. 1-M 85
Waggoner, Whibert Oil Co. 1-C ..... dry
Waggoner, Electra Texas Oil Co. 2 20
Waggoner, Hoffer Oil Corp. 1 ..... dry
Castlebury, Humble Oil & Ref. Co. 18-B 15
Waggoner, Humble Oil & Ref. Co. 3-D. dry

Wells completed 29
Production 6050
Dry 7

ARCHER COUNTY

Thompson, Clair et al 1 ..... dry
Netherton, Consolidated Oil Co. 3 ..... dry
Wilmot, Dale et al 16 10
Wilson, Maxson et al 2 60
Miller, Pace et al 2 30
Cowan, Waite Phillips 1 ..... dry
Wilson, T. B., Waite Phillips 2-A..... 50
Wilson, T. B., Waite Phillips 5-B..... 45
Luke Wilson, Waite Phillips 36 ..... dry
Wilson, Staley et al 2 100
Wilson, Staley et al 1 25
Parrish, Texhoma Oil & Ref. Co. 1 ..... dry
Gose, Texhoma Oil & Ref. Co. 51 65
Boren, Bridwell et al 3 ..... dry
Darilek, Jones et al 2 ..... dry
Routan, Root Drilling Co. 5 ..... dry
Falls County, Terminal Oil Co. 2 10
Wilson, Barkley et al 15 55
Wilson, Burns et al 10 45
Welsh, Consolidated Oil Co. 1 ..... dry
Parrish, Franklin et al 14-A 15
Kemp & Kempner, Kimmel et al 9..... 35
Kemp & Kempner, Kimmel et al 10.. 65
Kemp & Kempner, Kimmel et al 11.... 15
Kemp and Kempner, Langford et al 11 25
Wilson, Lomax et al 9 75
Wilson, Maxson et al 3 ..... dry
Wilson, Waite Phillips 33 ..... dry
T. B. Wilson, Waite Phillips 6-B 140
Gose, Texhoma Oil & Ref. Co. 53..... dry
Fee, Young et al 1 ..... dry
Wilson, Barkley et al 14 65
Wilson, Empire Gas & Fuel Co. 12-B .. 15
Wilson, Lomax et al 8 105
Mankins, Maer et al 1 ..... dry
Wilmot, Magnolia Pet. Co. 9 10
Rutter, Norwood et al 1 10
Parrish, Oil Investment Co. 3 ..... dry
Miller, Pace et al 1 40
White, Phillips Pet. Co. 69 10
Jackson, Shappell Oil Co. 14 75
Wilmot, Sibley et al 11 40
Parrish, Sunshine Consolidated Oil Co. 10 65
Wilson, Texhoma Oil & Ref. Co. 1 .... dry
Taylor, Tidal Oil Co. 1 ..... dry
Boren, Bridwell et al 4 ..... dry
Boren, Clark et al 2 ..... dry
Ray, Hanover et al 1 ..... dry
Hausler, Lyons et al 1 ..... dry
Boren, Madden et al 5 5
Goldsmith, Magnolia Pet. Co. 10 50
Portwood, Magnolia Pet. Co. 1 145
Ickert, Marland Oil Co. 2 15
Abercrombie, Panhandle Ref. Co. 5 ... 10
Anderson, Perkins et al 6 120
Wolfe, Waite Phillips 12 40
Ickert, Shasta Oil Co. 11 ..... dry
Blewett, The Texas Co. 1 ..... dry
Hill, The Texas Co. 10 30
Brom, Trio Oil Co. 3 100
Brom, Trio Oil Co. 4 800
Wilmot, Roller et al 7 40
Hutcherson, Caldwell et al 1 75
Wilson, Empire Gas & Fuel Co. 12-B .. 60
Wilson, Lomax et al 10 55
Jackson, Muse et al 1 ..... dry
T. B. Wilson, Waite Phillips 3-A..... 95
T. B. Wilson, Waite Phillips 7-B 140
T. B. Wilson, Waite Phillips 8-B 165
Luke Wilson, Waite Phillips 34 135
Luke Wilson, Waite Phillips 35 155
Wilson, Fandem Oil Corp. 1 ..... dry
Parrish, Ramming et al 1 ..... dry
Jackson, Shappell Oil Co. 33 50
Jackson, Shappell Oil Co. 35 100
Parkey, Simms Oil Co. 1 ..... dry
Finley, Trahan et al 1 ..... dry
Jackson, Wichtex Oil Co. 1-C ..... dry
Wilson, Wilson Drilling Co. 4-A ..... dry
Spain, Coombs et al 1 ..... dry
Parkey, Crabtree et al 1 ..... dry
Lane, Hobbs et al 4 ..... dry
Goldsmith, Magnolia Pet. Co. 11 30
Cowan, Major Pet. Co. 1 40
Cockrell, Pandem Oil Corp. 1 10
Young, Pandem Oil Corp. 1 280
Wolfe, Waite Phillips 13 ..... dry
Richardson, Sun Co. 2 210
Richardson, Sun Co. 2 100
Kinder, Superior Oil Prod. Co. 3 ..... dry
Hill, The Texas Co. 11 445
Hill, The Texas Co. 12 200
Hill, The Texas Co. 13 150
Boren, Bridwell et al 5 ..... dry
Neal, Evangeline Pet. Co. 1 ..... dry
Boren, Madden et al 6 165
Boren, Madden et al 7 30
Brazina, Perkins et al 1 ..... dry
Richardson-Mayfield, Prairie Oil & Gas Co. 30 25
Boren, The Texas Co. 3 45
Oldham, Texhoma Oil & Ref. Co. 1.... 70
Carr, Weldon et al 1 ..... dry

Wells completed 102
Production 5610
Dry 39

YOUNG COUNTY

Campbell, Clark et al 1 ..... dry
Hughes, Hinson et al 1 20
Campbell, Humble Oil & Ref. 1-A..... dry
Dunagan, Roamer Oil Co. 3-B 40
Dashe, Shasta Oil Co. 3 ..... dry
Hausler, Texas Unity Oil Co. 15 100
Campbell, Texhoma Oil & Ref. Co. 1 .. 170
Keathley, Christie et al 1 60
Campbell, Murchison et al 19-D ..... dry
Campbell, Richards et al 2 ..... dry
Hughes, Seaboard Oil & Gas Co. 4 ..... dry
Texhoma, Shaw et al 1 ..... dry
Carpenter, Simms Oil Co. 6-A ..... dry
White, Suggett et al 1 ..... dry
Fee, Texhoma Oil & Ref. Co. 1 ..... dry
Doyle, Murchison et al ..... dry
Cathey, Roeser et al 1-B 150
Sloan, Texas Unity Oil Co. 1 60
Campbell, Texhoma Oil & Ref. Co. 2... 100
Campbell, Texhoma Oil & Ref. Co. 3... 80
Campbell, Texhoma Oil & Ref. Co. 4... 95
Dunagan, Carey Bros. 1 ..... dry
Leath, Clark et al 1 75
Rathell, Consolidated Oil Co. 1 ..... dry
Kemp, Lesh et al 11 15
Bloodworth, Murchison et al 2 ..... dry
Thomas, Swastika Oil Synd. 1 ..... dry
Hausler, Texas Unity Oil Co. 14 400
Hausler, Texas Unity Oil Co. 16 ..... dry
Rogers, Texas Unity Oil Co. 1 ..... dry
Dyer, Texhoma Oil & Ref. Co. 1 ..... dry

Wells completed 31
Production 1365
Dry 18

STEPHENS COUNTY

Cunningham, Collins et al 1 380
Satterfield, Cosby Oil & Gas Co. 1..... gas
Sikes, Curry Pool Oil Co. 1 ..... dry
Swenson, Swensondale Oil Co. 31 30
Langford, Thompson et al 1 ..... dry
First National Bank, Walker et al 4 .. dry
Crowley, Eidson et al 3 ..... dry
Elliott, Swensondale Oil Co. 1 ..... gas
Swenson, Swensondale Oil Co. 19 ..... dry
Hill, Mid-Kansas Oil & Gas Co. 17.... 105
Ware, Prairie Oil & Gas Co. 4 ..... gas
Hawkins, States Oil Corp. 1 ..... dry

Wells completed 12
Production 515
Dry 6
Gas 3
Gas production 2,750,000

EASTLAND COUNTY

Brashear, Cornelius and Taggart 2 30
Waggoner, Corzellus and Gordon 1 40
Jones, Davisson et al 1 ..... gas
Pelfrey, Root et al 1 ..... gas
League, Adams et al 1 5
Blackman, Kirk et al 1 ..... dry
Allman, Magnolia Pet. Co. 9 15
Henderson, States Oil Corp. 3 175
Scott, Teatsworth et al 6 100
Pettit, Robert Oil Corp 1-C 75
Allman, Magnolia Pet. Co. 8 50
Edmondson, Shannon et al 1 ..... dry
Henderson, States Oil Corp. 4 60
Raney, Brown & Co. 1 ..... dry

Wells completed 14
Production 550
Dry 3
Gas 2
Gas production 6,500,000

BROWN COUNTY

Newton, Gilliman et al 17 ..... dry
Prather, Maloy et al 2 100
Clark, McLester Oil Co. 2 80

Kilgore, Moore et al 1 ..... dry
Prather, Schaffner et al 3 350
Clark, Conway Bros. 1 5
Gaines, Simms Oil Co. 2 75

Wells completed 7
Production 610
Dry 2

REAGAN COUNTY

University, Big Lake Oil Co. 43 280
University, Texon Oil & Land Co. 23, Group 1 430
University, Texon Oil & Land Co. 29, Group 1 120
University, Big Lake Oil Co. 45 690
University, Big Lake Oil Co. 47 1285
University, Texon Oil & Land Co. 24, Group 1 430
University, Big Lake Oil Co. 30 1320
Wilson, Marland Oil Co. 1 ..... dry

Wells completed 8
Production 4555
Dry 1

WILDCATS

Callahan County—
Block 61, Albritton et al 1 75
Block 62, Albritton et al 1 75
Block 84, May et al 1 200
Block 46, Bithers et al 1 600
M. K. & T. Cranfill et al 1 75
Block 78, Lowe et al 1 40
Block 81, Lowe et al 1 20
Block 50, May et al 1 200
McDonough, Mook Texas Oil Co. 2 70
Breeding, Rupert et al 1 ..... dry
Block 88, Wakefield et al 1 20
Block 91, Cranfill et al 1 50
Block 4, Evans et al 1 ..... dry
Block 9, May et al 1 ..... gas
White, Moore et al 1 ..... dry
Block 66, Cranfill et al 1 30
Hutchinson County—
Smith, McIlroy Bros. 1 100
Whittenburg, Coble et al 1 75
Kingsland, Phillips et al 2 425
Carson County—
Burnett, Marland Oil Co. 4 75
Burnett, The Texas Co. 6 225
Burnett, Greenwood et al 1 ..... gas
Burnett, American Ref. Co. 1-C ..... dry
Clay County—
Myers, Cook et al 1 ..... dry
Waggoner, Lone Star Gas Co. 26 ..... dry
Holloway, Lone Star Gas Co. 15 45
Holloway, Lone Star Gas Co. 16 ..... gas
Van Winkle, Navarro Oil Co. 1 ..... dry
Montague County—
Maddox, Texhoma Oil & Ref. Co. 2 140
Jones, Humphreys Corp. 2 ..... gas
Maddox, Pure Oil Co. 2 45
Hinds, Humphreys Corp. 1 85
Shackelford County—
Leschber, Hayes et al 1 10
Black, Lion Tamers Oil Co. 1 10
Black, Lion Tamers Oil Co. 2 ..... dry
Meyers, Tannehill et al 6 5
Elliott, Brannon et al 5 ..... dry
Clausell, Milham Corp. 2 ..... dry
Black Bros., Loggie et al 6 5
Palo Pinto County—
Chestnut, Upham Gas Co. 2 ..... gas
Hart, Hart Oil Corp 10 ..... dry
Stuart, Texas Pacific Coal & Oil Co. 149 ..... dry
Mitchell County—
Keynard, Eastland Oil Co. 4 135
Morrison, California Co. 14 45
Jack County—
Marshall, Robinson et al 1 ..... dry
Loving County—
Russell, Ramsey Oil Co. 1 ..... dry
Throckmorton County—
Stacey, Associated Pet. Co. 1 95
Reynolds, Associated Pet. Co. 3 ..... dry
Richards, Hoffer Oil Corp. 1 ..... dry
Concho County—
Koester, Dome Production Co. 2 ..... dry
Gray County—
Combs & Worley, H. F. Wilcox 1 100
Parker County—
Evans, Swensondale Oil Co. 1 ..... dry
Taylor County—
Bowyer, Sanger Oil & Ref. Co. 1 ..... dry
Wheeler County—
Williams and Laycock, Midway Oil Co. 1 gas
Tindall, Best Oil & Gas Co. 1..... dry
Baylor County—
Turberville, Bridwell et al 1 ..... dry
Crockett County—
Powell, Humble Oil & Ref. Co. 1 20
Powell, Humble Oil & Ref. Co. 2 25
Massey, Crockett Drilling Synd. 1 .... dry
Harris, Humble Oil & Ref. Co. 1 ..... dry
Grayson County—
Cannon, The Texas Co. 1 ..... dry
Garza County—
Connell, Emerald Oil Co. 1 ..... dry
Scurry County—
Burris, Hood et al 1 ..... dry
Sterling County—
Foster, Chicago Texas Oil & Gas Co. 1. dry
Foster, Wrightsman Pet. Co. 1 ..... dry
Hull, Wrightsman Pet. Co. 1 ..... dry
Reeves County—
Bell, Dome Drilling Synd. 1 ..... dry
Terrell County—
Fee, Dunn et al 1 ..... dry
Hudspeth County—
Gardner, Bolle Oil Association 1 ..... dry

Wells completed 69
Production 2895
Dry 32
Gas 6
Gas production 61,700,000

WICHITA COUNTY

Rigs
Hansard, Burt et al 1.
Birk, White et al 1.
Burnett, Hammond et al 3, Jennings 4.
Maer, Magnolia Pet. Co. 33, Watkins 10.
Wells Drilling
Holtzen, Magnolia Pet. Co. 8, Reilly 119, Reilly 122, Reilly 124.
Lowrance, Patterson et al 1.
Beach, Texhoma Oil & Ref. Co. No. 1, Bentley 1.
Davis, Whibert Oil Co. No. 1.
McClure, White et al 1.
Dullon, Simms Oil Co. 3.
Jennings, Apple et al 15-A.
Jennings, Brader et al 2.
Jennings, Bullington et al 10.
Hirschi, Compton Oil Co. 1.
Pierce, Empire Gas & Fuel Co. 15.
Waggoner Bros., Hammon et al 4.
Murger, K-M-A Oil Co. 22.
Allen, Magnolia Pet. Co. 66, Honaker 69, Maer 30, Pratt 13-A, Ramming 16-A.
Rio Bravo 51, Rio Bravo 52, Watkins 8.
Pratt, O'Donohoe et al 2.
Henson, Ryan Pet. Co. 2.
McCarty, Shappell Oil Co. 4-B.
Burnett, Texhomas Oil & Ref. Co. 4-L, Burnett 3-M, Waggoner Bros. 9, 10.
Dame, Wolfe et al 2.
Rigs, 6; wells drilling, 32; total, 38.

WILBARGER COUNTY

Rigs
Castlebury, Burton et al 2.
Waggoner, Humble Oil & Ref. Co. 1-K, 1-L.
Waggoner, Landreth Prod. Co. 1-EE, 1-H, 1-PP, 1-OO.
Waggoner, Milham Oil Corp. 2-A, 1-D.
Waggoner, Brady et al 1.
Wells Drilling
Sigler-Waggoner, Atlantic Oil Prod. Co. 3.
Bond, Barkley et al No. 2.
Stephens, Barkeley et al 5-A, 6-A, 7-A, 8-A.
Servatius, Bridwell et al 1.
Stephens, Bridwell et al 12.
Zipperle, Continental Oil Co. 7, 8.
Waggoner, Herbert Oil Co. 1.
Castlebury, Humble Oil & Ref. Co. 17, 21, 22.
Stephens, Humble Oil & Ref. Co. 33-A, 34-A 36, 37.
Waggoner, Humble Oil & Ref. Co. 3-G, 1-H, 2-H, 3-H, 1-I.
Castlebury, Kimberlin et al 1.
Waggoner, Kolp et al 10, 11.
Waggoner, Landreth Prod. Co. 2-A, 1-AA, 4-D, 5-D, 6-D, 8-D, 1-E, 3-F, 6-F, 1-G, 1-H, 1-P, 1-W.
Waggoner, Lawson et al 14 (Waggoner, Levy et al 1).
Waggoner, Jim McCamey et al 1.
Stephens, McCamey et al 24, 25, 26, 27, 28.
Fee, Magnolia Pet. Co. 70, Piper 46, Summer 50, Jiggs-Waggoner 1.
Waggoner, Milham Corp. Co. 1-B, 1-C, 1-H, 2-H.
Dill, Petroleum Production Co. 2-B.
Waggoner, Prairie Oil & Gas Co. 2-A, 1-B.
Waggoner, Pratt et al 1.
Waggoner, Roeser et al 1-B.
Waggoner, Roxana Pet. Co. 2-A.
Waggoner, Shamrock Oil Co. 1.
Waggoner, Sloan et al 1.
Castlebury, Smith et al 1.
Stephens, Staley et al 8, 9, 10, 11.
Waggoner, Texhoma Oil & Ref. Co. 1.
Waggoner, Tidal Oil Co. 1.
Zipperle, Travis Oil Co. 2.
Bond, Bob Waggoner et al 6.
Dennis, Wood et al 1.
Rigs, 16; wells drilling, 73; total, 83.

ARCHER COUNTY

Rigs
Morwits, Hart Oil Corp 1.
Wilson, Lomax 11.
Brown, Panhandle Ref. Co. 1.
Portwood, Magnolia Pet. Co. 4.
Falls County, School Land, Simms Oil Co. 1.
Oldham, Hammond et al No. 1.
Crawford, Pandem Oil Corp. 1.
Wells Drilling
Kemp & Kempner, Shasta Oil Co. 1.
Helm, Staley et al 1.
Wilmot, Boller et al 8.
Wisdom, Burns et al 1.
Wilson, Burns et al 1.
Hutcherson, Coldwell et al 2.
Wilson, Carter et al 1.
Cowan, Consolidated Oil Co. 1.
Wilson, Empire Gas & Fuel Co. 15-B, 24-C.
Cowan, Fletcher et al 1.
Jackson, Grisham et al 1.
Hutcherson, Hill et al 1.
Brown, Jones et al 1.
Jackson, Kentucky Oil Corp. 1.
Rutty, Magnolia Pet. Co. 4, Wilmot 10.
Rutty, Norwood et al 1.
Dale, Oakes et al 1.
Miller, Pace et al 3.
Hutcherson, Pandem Oil Corp. 1.
White, Phillips Pet. Co. 87.
Browning, Ramming et al 1.
Wilmot, Sibley et al 12.
Parrish, Staley et al 1.
Wilson, Lomax et al 3.
Cowan, Wharton et al 1.
Wilson, Woodburn Oil Corp. 24-A.
Abney, Young et al 1.
Fee, Young et al 2.
Oldham, Consolidated Oil Co. 1.
Wolf, Independent Oil & Gas Co. 1.
Rudd, Lincoln et al 1.
Logan, Logan et al 1.
Abercrombie, Panhandle Ref. Co. 6.
Anderson, Perkins et al 7.
Wilhelm, Reilly et al 1.
Farmer, Sun Co. 4.
Oldham, Texhoma Oil & Ref. Co. 2, Abercrombie 1.
Portwood, American Ref. Co. 1.
Portwood, Magnolia Pet. Co. 2, 3.
Richardson, Marland Oil Co. 3, 5.
Merrick, Darlick 1.
Cockrell, Pandem Oil Corp. 2, 3, Young 2.
Richardson, Simms Oil Co. 1.
Richardson, Sun Co. 4, 5.
Hill, The Texas Co. 14.
Brown, Trio Oil Co. 5, 6.
Young, Verschoyle 1.
Rigs, 7; wells drilling, 56; total, 63.

YOUNG COUNTY

Rigs
Leberman, F. H. E. Oil Co. 1.
Wells Drilling
Zimmerman, Applegate et al 1.
Marshall, Bashara et al 2.
Steen, Casey et al 1.
Campbell, Clark et al 2.
Jeffrey, Consolidated Oil Co. 1.
Scarborough, Coones et al 2.
Eppstein, Dyer et al 1.
Howard, Golding et al 1.
Morrison, Hinson et al 1.
Kunkel, Madden et al 1.
Rogers, McLester Bros. 1.
Donnell, McQuain Dry. Co. 1.
Stewart, Minnich et al 2.
Jeffrey, Murchison et al 1.
West, Murchison et al 1.
Williams, Nash et al 4.
Benson, Parks et al 1.
Leberman, Reed et al 1.
Cathey, Roeser et al 4.
Burgess, Roxana Pet. Co. 3.
Winkler, Shasta Oil Co. 1.
Goldston, Simms Oil Co. 1.
Fee, Stovall et al 4.
Moore, The Texas Co. 1.
West, Texas Unity Oil Co. 1.
Campbell, Texhoma Oil & Ref. Co. 8, 9.
Campbell, Tidal Oil Co. 3, 4, 5, 6.
Daws, Vance et al 1.
Robinson, Wellman et al 1.
Belknap Coal, Whitehead et al 2-B.
Campbell, Willis et al 1.
Anderson, Wilson et al 1.
Rigs, 1; wells drilling, 36; total, 38.

STEPHENS COUNTY

Rigs
Akin, Brown & Co. 3.
Fombrough, Hartt et al 1.
McClesky, Kinney et al 1.
Goswick, Lightfoot et al 1.

Wells Drilling
Cunningham, Gardner et al 2.
Hill, Mid-Kansas Oil Co. 7, 8.
Cunningham, Mid-Texas Oil Co. 3, Morrison 1.
Langford, Rhodes et al 1.
Cobb, Swensondale Oil Co. 8, Echols 1, Echols 1-B.
Martin, Texas Consolidated Oil Co. 7.
Kirtley, Texas Pacific Coal & Oil Co. 4.
Keathley, Atkinson et al 1.
Smith, Carter et al 1.
Goforth, Corzelius Bros. 1.
Ming, Cuervo Oil Synd. 2.
Sikes, Curry Pool Oil Co. 2.
Post, Eidson et al 1.
Long, Hughes et al 1.
Thompson, Hughes et al 1.
Walker-Caldwell, Illinda Oil Co. 3.
Elliott, Landreth Production Co. 1, Gratz 4, Guest 1.
Head, Mook-Texas Oil Co. 3.
Suddeth, Roth et al 1.
Ming, Scanlon et al 1.
Cooper, States Oil Corp. 2, 3.
Adams, Texas Pacific Coal & Oil Co., 7, Binney 57, Hand 3, Hand 4, Veal County 3.
Curry, The Texas Co. 11, Grimes 2.
Keathley, Walker-Caldwell 1.
Rigs, 4; wells drilling, 35; total, 39.

EASTLAND COUNTY

Rigs
Webb, Mahlstedt Oil Co. 1.
Grove, Adams et al 2.
Wells Drilling
Reid, Barkley et al 1.
Thurman, Hoffer Oil Corp. 1.
Allen, Lightfoot et al 3.
Harris, Magnolia Pet. Co. 7.
Williams, Mid-Kansas Oil Co. 1.
Pettit, Robert Oil Corp. 1-B.
Amis, Hickok P. & D. Co. 1, Kimbrough 1.
Kimbrough, Leon Oil Co. 1.
Leveridge, Reeves et al 1.
Hart, Root et al 1, Kurklin 1, Luse 1.
Rigs, 2; wells drilling, 12; total, 14.

BROWN COUNTY

Rigs
Gunn, Gillispie et al 1.
Chambers, Gillman et al 3.
Clark, McCamey et al 1.
Woolridge, McLester Oil Co. 1.
Wells Drilling
Newton County, Adams et al 1.
Williams, Anderson et al 1.
Gaines, Bateman et al 1.
Boysen, Boysen et al 1.
Woolridge, Conway Bros. 1.
Stone, Eastland Oil Co. 1.
Prather, Evans et al 1.
Chambers, Gillman et al 4.
Stover, Humble Oil & Ref. Co. 1.
Byrd, Landreth Production Co. 1.
Prather, Mulloy et al 3.
Gaines, Prairie Oil & Gas Co. 9.
Gaines, Simms Oil Co. 2.
Newton, Williamson et al 1.
Rigs, 4; wells drilling, 14; total, 18.

REAGAN COUNTY

Rigs
University, Big Lake Oil Co. 23-A, University 25-A.
University, Texon Oil Co. 36-I.
Wells Drilling
University, Big Lake Oil Co. 37, 49, 51, 53, 54, 55 20-A.
Sawyer, Humphreys Oil Co. 1.
University, Tannehill et al 1.
University, Texon Oil & Land Co. 31, 32, 33, 34, 35.
Rigs, 3; wells drilling, 14; total, 17.

WILDCATS

Rigs
Callahan County—
Smart, Petroleum Exploration Co. 1.
Wells Drilling
Block 4, Albritton et al 1.
Block 4, Brannon et al 1.
Block 23, Brannon et al 1.
Block 45, Brannon et al 1.
Block 53, Brothers et al 1.
Barr, Cranfill et al 1.
Block 1, Cranfill et al 1.
Block 3, Cranfill et al 1.
Block 71, Cranfill et al 1.
M. K. & T., Cranfill et al 4.
Smith, Cranfill et al 1.
Block 65, Fain et al 1.
Block 21, Guffey et al No. 14.
Conlee, Hallmack Oil Co. 1.
Block 25, Harper et al 1.
Block 12, Harris et al 1.
Brigner, Hornbead et al 1.
Block 15, Jones et al 1.
Block 20, Jones et al 1.
Block 22, Kirk et al 1.
Block 29, Kirk et al 1.
Block 52, May et al 1.
Block 79, May et al 1.
Block 7, McCamey et al 1.
Smith, McCamey et al 1.
Strahon, McCamey et al 1.
Throckmorton County—
Rigs
Lee, Reiter-Foster 1.
Wells Drilling
Cummings, Associated Pet. Co. 1, Cummings 2.
Harrison, Humble Oil & Ref. Co. 1, Stubblefield 2.
Richards, Larkin et al 1.
Davis, Magnolia Pet. Co. 1
Parrott, Red Bank Oil Co. 1.
Lee, Reiter-Foster 1.
Reynolds, Texhoma Oil & Ref. Co. 3.
Rigs
Shackelford County—
Reynolds, Hope Pet. Co. 6, Green 1.
Wells Drilling
Proctor, Carter et al 1.
Davis, Gillespie et al 1.
McLemone, Humble Oil & Ref. Co. 1.
Newell, Mid-Kansas Oil & Gas Co. 1.
Clausell, Milham Corp. 3.
Compton, Phillips Pet. Co. 2, Fry 1, Parrish 9, Smalley 1.
Cook, Roeser et al 1.
McKeevar, United Mutual Oil Co. 1.
Wells Drilling
Palo Pinto County—
Dalton, Jack Dalton Oil Co. 6.
Edmondson, Upham Gas Co. 5.
Cardwell, Hart et al 2.
Rasmussen, Fender Prod. Co. 2.
Belding, Upham Gas Co. 4.
Rigs
Mitchell County—
Shumaker, Marland Oil Co. 1.
Swenson, California Co. 1.
Wells Drilling
Womack, Atlantic Oil Prod. Co. 1, 2.
Elwood, Green et al 1.
Coleman, Magnolia Pet. Co. 1, Watson 1, Adams 2.
Abrams, California Co. 10, Maller 2, Elder 4.

Rigs
Hutchinson County—
Smith, Crosbie et al 1.
Johnson, Native Oil Co. No. 1.
Whittenburg, Canyon Oil Co. 2.
Smith, Tyrrell et al 1.
Wells Drilling
Weatherby, American Ref. Co. 1.
Whittenburg, Coble et al 2.
Pitts, Crosbie et al 1.
Smith, Dixon Creek Oil Co. 2-A.
Whittenburg, Douglas Oil Co. 1.
Perkins, Panhandle Refining Co. 3.
Whittenburg, Parks Bros. 1.
Weatherby, Phillips Pet. Co. 1.
Kingslord, Travelers Oil Co. 1.
Kingslord, Twin Six Oil Co. 2.
Smith, Western Enterprise Oil & Gas Co. 2.
Rigs
Carson County—
Burnett, Crosbie Oil Co. 3.
Wells Drilling
Bibins, Amarillo Oil Co. 3-B.
Burnett, American Refining Co. 3-A.
Burnett, Culberson Bros. 1.
Burnett, The Texas Co. 4.
Rigs
Coleman County—
Harris, English et al 1.
McCrary, Monroe Prod. Co. 1.
Powell, Texas Pacific Coal & Oil Co. 1.
Wells Drilling
Morris, Conary et al 1.
Harris, Canyon Oil & Gas Co. 1.
Morris, Duncan et al 1.
Aston, Gillman et al 1.
Atkinson, Mahlstedt Oil Co. 1.
Overall, Mahlstedt Oil Co. 1.
Howe, McCamey et al 1.
McDermitt, McLester Oil Co. 1.
Hall, The Texas Co. 1.
Nicholson, Wright et al 1.
Kelly-Grads, Cranfill et al 1.
Rigs
Comanche County—
Evans, Brown Drilling Co. 1.
Wells Drilling
Utterback, Trojan Oil Co. 1.
Rigs
Clay County—
Kafer, Tarkington et al 1.
Rigs
Montague County—
Steadman, Universal Oil Co. 1.
Rigs
Cooke County—
Hyman, Lannier et al 1.
Rigs
Lynn County—
Edwards, Hart Oil Corp. 1.
Rigs
Scurry County—
Towle, Morrison et al 1.
Rigs
Winkler County—
Hendrick, Westbrook et al 1.
Rigs
Crockett County—
Powell, Humble Oil & Ref. Co. 1.
Rigs
Sutton County—
Ellison, Chesapeake Oil Co. 1.
Wells Drilling
Haskell County—
Macon, Herbert Oil Co. 1.
Ballard, Kouri et al 2.
Stoker, Staley et al 1.
Colbert, Wolf et al 1.
Colbert, Weirt et al 1.
Wells Drilling
Gray County—
Byrum, Osborne et al 1.
Heithholt, Empire Gas & Fuel Co. 1.
Wells Drilling
Wheeler County—
Williams-Laycock, Midwest Explor. Co. 1-A.
Westmoreland, Shedden et al 1.
Wells Drilling
Collingsworth County—
Hughes, Continental Oil Co. 1.
Wells Drilling
Foard County—
Easley, Humble Navarro Oil Co. 1.
McCoy, The Texas Co. 1.
Wells Drilling
Cottle County—
Dulaney, Woodley et al 2.
Wells Drilling
King County—
Masterson, California Co. 1.
Wells Drilling
Baylor County—
Portwood, Pandem Oil Corp. 1.
Haggard, British American Oil Co. 1.
Garner, Cosden et al 1.
Wells Drilling
Upton County—
Union Land Co., Kirby Pet. Co. 1.
Wells Drilling
Crane County—
Cowden, Cardona Oil & Potash Co. 1.
Cowden, Penn Texas Developing Co. 1.
Cowden, Texas Developing Co. 1.
Wells Drilling
Reeves County—
Abrams, Schooler et al 1.
Kloh, World Oil Co. 1.
Wells Drilling
Jeff Davis County—
Wingo, Herbert Oil Co. 1.
Wells Drilling
Pecos County—
Sherbino, Dixie Oil Co. 1.
Horsehensen, Dixie Oil Co. 1.
Perry, Transcontinental Oil Co. 1.
Wells Drilling
Val Verde County—
Whitehead, Independent Operators 1.
Moore, Williams et al 1.
Wells Drilling
Presidio County—
Toole Headlock et al 1.
Wells Drilling
Howard County—
Scott, Deep Rock Oil Co. 1.
O'Daniel, Marland Oil Co. 1.
Wells Drilling
El Paso County—
Fee, Burns et al 1.
Wells Drilling
Culberson County—
Gresham, California Co. 1.
Wells Drilling
Loving County—
Kyle, Rio Grande Oil & Ref. Co. 1.
Glasscock County—
Mook, Mariand Oil Co. 1.
Wells Drilling
Erath County—
Laney, Goodwin et al 4.
Wells Drilling
Taylor County—
Anderson, Sanger Oil & Ref. Co. 1.
Wells Drilling
Sterling County—
Reynolds, Harly et al 1.

Mills, White Eagle Oil Co. 1.
Wells Drilling
Tom Green County—
Clark, Roxana Pet. Co. 1.
Wells Drilling
Irion County—
Sawyer, Kirby Pet. Co. 1.
Case, Virginia Texas Pet. Co. 1.
Wells Drilling
Foard County—
Easley, Humble Navarro Oil Co. 1.
McCoy, The Texas Co. 1.
Wells Drilling
Potter County—
Bivins, Amarillo Oil Co. 4-A.
Bivins, Prairie Oil & Gas Co. 1.
Wells Drilling
Collingsworth County—
Hughes, Continental Oil Co. 1.
Rigs, 22; wells drilling, 135; total, 157.

EAST CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Navarro	6	82	3	1	2	9	11
Limestone–							
Freestone	4	30	3	0	0	5	5
Miscellaneous.	*20	...	20	0	0	14	14
Total Nov.	30	112	26	1	2	28	30
Total Oct.	16	354	9	0	9	50	59
Difference	14	242	17	1	7	22	29

*Miscellaneous completions, all dry holes, were old wells that have been shut down most of them for many months, but not before definitely known to have been abandoned.

COMPLETIONS
NAVARRO COUNTY
Cerf, Barclay & Meadows 5-A..... 60
T. & B. V., Navarro Oil Co. 1..... dry
Davis, Humble O. & R. 31..... 18
Davis, Humble O. & R. 32..... 4
Pugh, Humble O. & R. 11..... dry
Swinks, Sun Oil 2..... gas
Completed 6
Production 82
Dry 3
Gas 3
Gas production 3,000,000
ANDERSON COUNTY
Parker, J. F. William 1..... dry
Brooks & Auld, Rosser et al 1..... dry
Monning Plant, Palestine O. & G. 1.... dry
BOWIE COUNTY
Parkey, Dalby Springs O. & G. 1..... dry
Rochelle, Delaney O. & G. 1..... dry
CASS COUNTY
Speers, Bankers Trust 1..... dry
Evans, Caldwell O. & G. 1..... dry
HILL COUNTY
Bartou, Pure Oil 1..... dry
RAINES COUNTY
Peeples, Cree & Coulter 1..... dry
TITUS COUNTY
Antone, Magnolia Petroleum 1..... dry
LIMESTONE-FREESTONE COUNTIES
Rivers, Eisenmayer et al 1..... abd
Oliver, Lewis & Hunter 1..... dry
Spener, Peacock et al 1..... 30
Baker, Eisenmayer et al 1..... abd
Completed 4
Production 30
Dry 3
RED RIVER COUNTY
Dinviddie, Brewer Hines 1..... dry
Simmons, Clarksville-Texas Oil 1..... dry
Arnold, Isabelle Gibson 1..... dry
Antone, Johnson Petr. 1..... dry
Worthan, O'Bannon Bros. 1..... dry
Garland, Higgins Oil 1..... dry
VAN ZANDT COUNTY
Jones, Mexia Drg. Co. 1..... dry
Dunbar, Terrell Oil 1..... dry
KAUFMAN COUNTY
Davis, Pure Oil 1..... dry
RIGS AND WELLS DRILLING
LIMESTONE-FREESTONE COUNTIES
Wells Drilling and Shut Down
(Shut Down Wells Indicated by *)
Richardson, Wells et al 1.
Smith, Pure Oil 10-B.
Rivers, Eisenmayer 2.
Stroud, Magnolia Petr. 1.
Pickens, Kechi Petr.*
Seals, Pure Oil 1.
Wells drilling, 6.
NAVARRO COUNTY
Rigs
Barry, Elliott & Nicolle 1.
Harvard, McNeely & LaSuer 1.
Wells Drilling
Slime, Carrieta O. & G. 1.
Greer, Gilbert Johnson 1.
Westbrook, Elliott & Nicolle 1*.
Cerf, Farrish, Watts & Collins 4-A.
Moore, E. L. Smith Oil Co. 1.
Sneed, Kerr & Gillette 1.
Hillburn, Sun Oil Co. 3-A*.
Laird, King State Oil 1*.
Longbotham, Snowden & McSweeney 13.
Rigs, 2; wells drilling, 9; total, 11.
MISCELLANEOUS
Wells Drilling
Cherokee County—
Clapp, Collington Drilling Co. 1*.
Falls County—
Peacock, Highbanks Oil 1*.
Woodruff, Richardson Bros. & Mook Texas Oil 1.
Henderson County—
Gamble, Atlantic O. P. Co. 1.
Sterrett, Ferdinand Heine 1*.
Bounds, F. Hayne 1*.
Martin, Evans et al 1*.
Danaby, O. N. Billings 1*.
Hopkins County—
Brooks, Kelsey et al 1.
Hunt County—
Barnett, Tullail & Kelsey 1.
Kaufman County—
Mook, Cranfill & Griffiths 1.
Williamson, D. J. Harper 1.
Milam County—
Isaacs, John R. Lee 1.
Marshall, Allen & Harper 1.
Wells drilling, 14.

GULF COAST

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Batson	6	11,025*	0	0	6	6	12
Blue Ridge	2	0	2	0	0	2	2
Big Creek	1	200	0	0	0	2	2
Damon Mound	0	0	0	0	2	0	2
Goose Creek	7	365	1	0	1	14	15
Humble	2	300	0	0	1	6	7
Hull	14	6,810	6	0	5	9	14
High Island	6	825	2	0	0	6	6
Jennings (La.)	3	1,300	1	0	0	4	4
Markham	6	0	0	0	1	0	1
Lockport (La.)	2	0	2	0	2	6	8
Orange	10	14,325*	3	0	3	19	22
Pierce Jct.	0	0	0	0	1	2	3
Spindletop	7	1,865	0	0	2	5	7
Saratoga	1	5	0	0	0	1	1
Sour Lake	5	410	1	0	1	4	5
South Liberty	2	50	1	0	0	2	2
Vinton (La.)	9	700	3	0	1	5	6
W. Columbia	1	0	1	0	2	3	5
Miscellaneous	12	0	12	0	16	68	84
Total Nov.	90	38,180	30	0	44	164	208
Total Oct.	83	12,535	37	1	33	137	170
Difference	7	25,645	7	1	11	27	38

WELLS COMPLETED
BATSON
Paraffin, Ada Belle Oil 101..... 5
Paraffin, Ada Belle Oil 102..... 5
Paraffin, Ada Belle Oil 103..... 5
Trustee, Deutser Oil 13..... 6
Fee, Paraffin Oil 61..... 5
Hodges, Kirby-Capitol Oil 3..... 11000
Wells completed 6
Production 11025
BIG CREEK
Davis, Gulf Production 25..... 200
Well completed 1
Production 200
BLUE RIDGE
Robinson, The Texas Co. 13..... abd
Blakely, Gulf Production 12..... abd
Wells completed 2
Abandoned 2
GOOSE CREEK
Galliard, Gulf Coast - Crown Central Oil 13 75
Gillette, Allen & Marshall 2 (wo.)... 50
Freeman, Texas Exploration 5..... abd
Houston-Smith, Gulf Prod. 8..... 50
Smith, Sun Oil Co. 2 (wo.)..... 40
Smith, Humble Oil & Ref. 20 (wo.)... 75
Bryan, Powell Oil 6..... 75
Wells completed 7
Production 365
Abandoned 1
HUMBLE
Tuffley, F. M. Long 3..... 150
Tuffley, Sutherland et al 1..... 150
Wells completed 2
Production 300
HULL
Phoenix, Gulf Production 56..... 2000
Phoenix, Gulf Production 57..... 200
Phoenix, Gulf Production 58..... 200
Scarborough, Gulf Production 16..... 1000
Merchant, Yount-Lee Oil 5..... 250
Stengler, Yount-Lee Oil 7..... 1000
Dolbear, Republic Prod.-Houston Oil 96 125
Barngrover, Houston Production 9.... 40
Smith, Higgins Oil & Fuel 7..... 35
Harrison, Peer Oil 8..... 1000
Guedry, Humble Oil & Ref. 9..... 35
Hanna, Texas-Vacuum joint No. 6... 400
Merchant, Yount-Lee Oil 6..... 425
Phoenix, Gulf Prod. 7 (wo.)..... 100
Wells completed 14
Production 6810
HIGH ISLAND
Lockhart, Sun Oil Co. 1..... abd
Tiernan, Carter Oil 1..... abd
Smith, Gulf Prod. 2 (wo.)..... 800
Cade, Sun Oil Co. 6 (wo.)..... 25
Great Western, Transbay Oil 1..... abd
Smith, Gulf Prod. 4..... gas
Wells completed 6
Production 825
Gas 1
Abandoned 3
JENNINGS
Wilcox, General Pet. 1..... 300
Rex, Sutton & Bardel 1..... abd
Heywood, Port City Oil 1..... 1000
Wells completed 3
Production 1300
Abandoned 1
LOCKPORT
Phoenix, Vacuum-Gulf Co.'s joint 1-B.. abd
Phoenix, Vacuum-Gulf Co.'s joint 1-C.. abd
Wells completed and abandoned.. 2
ORANGE
Chesson, Continental Oil 8 (wo.).... 35
Carbello, Edgerly Pet. 8 (wo.)..... 40
Chesson, Orange Pet. 12..... dry
Bellaio, Sun Oil Co. 3..... sw
Hager-Moore, Gulf Prod. 6 (D.D.)... 3000
Peveto, Atlantic Oil Prod. 1 (wo.)... 100
McGuire, Kishi Dev. 5..... 150
Brown, Brownie Babbittee Oil 3 (wo.) sw
Chesson, Humble Oil & Ref. 23-B... 7000
Chesson, Continental Oil 16..... 4000
Wells completed 10
Production 14325
Dry and salt water..... 3
SPINDLETOP
Gladys, Hamm Brechlin Drlg. Co. 2.. abd
Gladys, Gulf Prod. 216..... 175
Lone Star, Sun Oil Co. 45..... 5
Tyrell, Lillian Oil 1..... 15
McFaddin, Yount-Lee Oil 1 1500
McFaddin, Unity Oil 87 20
Gladys, Gulf Prod. 217..... 150
Wells completed 7
Production 1865
SARATOGA
Teel, Paggi Bros. Oil 12..... 5
Well completed 1
Production 5
SOUR LAKE
Bashara, Lake Graham Oil 18..... dry
Fee, The Texas Co. 298..... 60
Bashara, Humble Oil & Ref. 19..... 150
Fee, The Texas Co. 281..... 200
Wells completed 5
Production 410
Dry 1
SOUTH LIBERTY
Antonie, Gulf Prod. 4..... 50
Deussen, Gulf Prod. 12..... abd
Wells completed 2
Production 50
Abandoned 1
VINTON
Vincent, Vinton Pet. 52..... 150
Rescue, Vinton Pet. 15..... 150
Rescue, Vinton Pet. 16..... sw
Rescue, Vinton Pet. 17 ..... sw
Gray, Vinton Pet. 52..... 150
Parks, Wilson & Broach 10..... 50
Joint, The Texas Co. 1..... abd
G. N. G., Gulf Refining 61..... 150
Vincent, Edgerly Pet. 8..... 50
Wells completed 9
Production 700
Abandoned and salt water..... 3
WEST COLUMBIA
Wilson, Humble Oil & Ref. 1..... sw
Well completed 1
Salt water 1
MISCELLANEOUS
Brazoria County—
Chester, Hamm & Co. 2..... abd
Fort Bend County—
Wisdom, Rycade Pet. 2..... abd
Wisdom, Rycade Pet. 3..... abd
Harris County—
Hunt, Brooks & Quinn 1..... abd
Jefferson County—
Francis, Walton Oil 1..... abd
Sun-Davis, Houston Oil 1..... abd
Jackson County—
Rogers, Houston Oil 1..... abd
Seliner, Vanderbilt Pet. 1..... abd
Orange County—
Gum Island, Orange Prod. 1..... sw
Wharton County—
Boling, Schumaker, The Texas Co. 1 abd
SOUTH LOUISIANA
Arcadia Parish—
Regan, Estropal Oil 1..... abd
Iberia Parish—
Loughride, United Oil & Gas 1 ..... abd
Wells completed and abandoned.. 12
RIGS AND WELLS DRILLING
BATSON
Rigs
Hooks, Vacuum Oil 1.
Paraffin, Ada Belle Oil 105.
Hooks, Sterling Oil 2.
Milhome, S. R. Buchanan 85.
Christian, Peer Oil 1.
Wing, Gulf Prod. 163.
Wells Drilling
Hodges, Kirby Pet. and Capitol Oil 3 (wo.).
Paraffin, Paraffin Oil 62.
La Jerza, The Texas Co. 1.
Milhome, S. R. Buchanan 84.
Hooks, Sun Oil Co. 75.
Smith, Gulf Prod. 1.
Rigs, 6; wells drilling, 6; total, 12.
BLUE RIDGE
Wells Drilling
West-Schenck, Gulf Prod. 3 (wo.).
Blakely, Gulf Prod. 13-B.
Wells drilling, 2.
BIG CREEK
Wells Drilling
Davis, Gulf Production 18 (wo.). 26.
Wells drilling, 2.
DAMON MOUND
Rigs
Bryan, Hamm & Co. 2.
Noack, Sinclair Oil & Gas 7.
Rigs, 2.
GOOSE CREEK
Rig
Chapman-Bryan, Gulf Production 11.
Wells Drilling
Smith, Humble Oil & Ref. 20 (wo.), 64, 65.
Harrell, Gulf Production 4.
Peninsula, Humble Oil & Ref. 29, 30.
H. Galliard, Gulf Production 8.
Galliard fee, Gulf Production 19.
Beaumont, Gulf Production 30, 32.
Galliard, Gulf Coast Oil 5.
Bryan, Powell Oil 6 dd.
Freeman, Texas Exploration 7 (wo.).
Smith, Sun Oil Co. 14-B.
Rig, 1; wells drilling, 14; total, 15.
HUMBLE
Wells Drilling
Bender, Sun Oil Co. 1.
Cherry, Roiyat Oil 4, 5.
Long, Marsalles Bros. 7.
Crow, J. E. Ratcliffe 3.
Hermann, Meskell & Meskell 17.
Rig, 1; wells drilling, 6.
HULL
Rigs
Guedry, Humble Oil & Ref. 19.
Merchant, Yount-Lee Oil 12 (wo.).
Phoenix, Gulf Production 61, 62.
Morris-Phillips, Gulf Production 21.
Wells Drilling
Dolbear, Republic Prod. 20, 53 (wo.), 117.
Taylor, Mecom Oil 3, 8 (wo.).
Taylor, Higgins Oil & Fuel 5.
Barngrover, Empire Gas & Fuel 17.
Abel, Empire Gas & Fuel 6.
Phoenix, Gulf Production 60.
Rigs, 5; wells drilling, 9; total, 14.
HIGH ISLAND
Wells Drilling
Smith, Gulf Production 3.
Smith, Sun Oil Co. 1.
Cade, Sun Oil Co. 4-C, 8.
McCarthy, Island Oil 1.
Great Western, Transbay Oil 12.
Wells drilling, 6.
JENNINGS
Wells Drilling
J. C., F. I. Getty 22.
Latrille, The Texas Co. 26, 104.
S. F. S., General Production 4.
Wells drilling, 4.
MARKHAM
Rig
Myers, Houston-Gulf Gas 2.
LOCKPORT
Rigs
Miller, Vacuum Oil-Gulf Ref. 6.
Bordages, Vacuum-Gulf 1.
Wells Drilling
Miller, Vacuum-Gulf 5.
Farquhar, Vacuum-Gulf 2.
Freidberg & Wolf, Vacuum-Gulf 1.
Lock-Moore, Vacuum-Gulf 3.
Prien Lake, Vacuum-Gulf 1.
Phoenix, Marland Oil 2.
Rigs, 2; wells drilling, 6; total, 8.
ORANGE
Rigs
State Land, Rycade Pet. 4-E.
Chesson, Continental Oil 1 dpng.
Chesson, Gulf Production 1-A dpng.
Wells Drilling
Hager, Atlantic O. P. 3 (wo.).
Brown, Brownie Babbittee Oil 3 dpng.
State Land, Rycade Pet. 13-B, 14.
Chesson, Humble Oil & Ref. 19-A, 29.
Barber, Humble Oil & Ref. 1.
McGuire, Kishi Dev. 6.
Winifree, Orange Pet. 7.
Chesson, Orange Pet. 12.
Chesson, Continental Oil 7, 16 (wo.).
Carbello, Edgerly Pet. 1-B.
Johnson, Sun Oil Co. 1 (wo.).
Gunstream, Sun Oil Co. 6 dpng.
State Land, Tillery Oil 2 (wo.).
Turner, Sinclair Oil & Gas 1.
Hager Fee, Gulf Production 18, 19.
Rigs, 3; wells drilling, 19; total, 22.
PIERCE JUNCTION
Rig
Settegast, Rio Bravo Oil 2-P.
Wells Drilling
Settegast, Rio Bravo Oil 1-P.
Taylor, Gulf Production 17.
Rig, 1; wells drilling, 2; total, 3.
SPINDLETOP
Rigs
Gladys, Flynn et al 1.
Gladys, Gulf Production 218.
Wells Drilling
Gladys, Yount-Lee Oil 1.
Keith-Ward, Stella Oil 7.
Henderson, Weber King 1.
Gladys, Hamm Brechlin Drlg. 2.
Terrell, Lillian Oil 2.
Rigs, 2; wells drilling, 5; total, 7.
SARATOGA
Well Drilling
Teel, Vacuum Oil 2.
SOUR LAKE
Rig
Jackson, J. H. Antillery 4.
Wells Drilling
Bashara, Lake Graham Oil 18 (wo.).
Hardin, Lake View Oil 45.
Bashara, McNamara Oil 14.
Gilbert, Yount-Lee Oil 2.
Rig, 1; wells drilling, 4; total, 5.
SOUTH LIBERTY
Wells Drilling
Antoine, Gulf Production 5.
LaCour, East Texas Oil 1 sd.
Wells drilling, 2.
VINTON
Rig
Star, Gulf Refining 35.
Wells Drilling
Rescue, Vinton Petroleum 16 dpng.
Gray, Vinton Petroleum 3.
Gray, The Texas Co. 2-A, 1-C.
Vincent, Edgerly Petroleum 9.
Rig, 1; wells drilling, 5; total, 6.
WEST COLUMBIA
Rigs
Arnold, The Texas Co. 22.
Underwood, Gulf Production 3 (wo.).
Wells Drilling
Lee, Hyde Production 1 sd.
Wilson, Humble Oil & Ref. 1-B dpng.
M. & W., Humble Oil & Ref. 1.
Rigs, 2; wells drilling, 3; total, 5.

SOUTHWEST TEXAS

Luling	0	0	0	0	1	5	6
Laredo	7	40	3	3	9	11	20
Somerset	3	24	0	0	1	3	4
Rockdale-Minerva	4	43	0	1	4	6	10
Jim Hogg County	12	1,990	1	2	2	8	10
Lockhart	16	2,150	3	0	5	12	17
Miscellaneous..	8	5	6	1	25	46	71
Total Nov..	50	4,252	13	7	47	91	138
Total Oct...	55	8,389	5	5	37	105	142
Difference..	5	4,137	8	2	10	14	4
Grand total:							
Gulf Coast ..	90	38,180	30	0	44	164	208
Southwest ...	50	4,252	13	7	47	91	138
Total Nov..	140	42,432	43	7	91	255	346
Total Oct...	138	20,924	35	5	69	210	279
Difference..	20	21,508	8	1	22	45	67

*Wells sanded.

WELLS COMPLETED
LAREDO
Puig, Bell et al 1..... abd
Arispe, United States Oil & Gas 1..... gas
Puig, Rydal Oil 17 40
Puig, Pet. 2..... abd
Bruni, Cole Pet. 1..... abd
Reisor, E. R. Marta 1..... wtr
——, Johnson & Detray 1..... gas
——, Snowden & McSweeney 1..... gas
Wells completed 7
Production 40
Gas 3
Dry and water 3
SOMERSET
Langley, Witherspoon Oil 2..... 8
Weimer, Helvetia Oil 12..... 8
Harvey, Frontier Oil 12..... 8
Wells completed 3
Production 24
ROCKDALE-MINERVA
Hamilton, Anchor Oil 8..... gas
Bluebonnett, Roundtree et al 9..... 20
Branch, Jennings Oil 3..... 15
——, Bynum & Palmer 1..... 8
Wells completed 4
Production 43
Gas 1
JIM HOGG COUNTY
Holbein, Kisselman & Stalbans 21.... gas
Holbein, Kisselman & Stalbans 22.... 200
Holbein, Kisselman *& Stalbans 18.... 200
Holbein, Kisselman & Stalbans 19.... 100
Holbein, Kisselman & Stalbans 20.... 65
Holbein, Kisselman & Stalbans 23.... dry
Martinez, O. W. Killiam 23..... 200
Martinez, O. W. Killiam 24..... 400
Martinez, O. W. Killiam 25..... 350
Martinez, O. W. Killiam 26..... 350

Martinez, Magnolia Pet. 8..... 125
Palacois, Simms Pet. 1..... gas

Wells completed 12
Production 1990
Gas 2
Dry 1

LOCKHART

Beaty, Gulf Production 33..... 250
Beaty, Gulf Production 34..... 250
Beaty, Gulf Production 35..... 50
Beaty, Gulf Production 36..... 50
Riddle, Gulf Production 11..... 250
Riddle, Gulf Production 12..... 250
Riddle, Gulf Production 13..... 50
Gwinn, Bright Oil 1..... abd
Beaty, The Texas Co. 13..... 40
Palmer, Witherspoon Oil 28..... 100
Brewer, Witherspoon Oil 30..... 100
Brewer, Witherspoon Oil 2..... 160
Brewer, Witherspoon Oil 3..... dry
Crenshaw, J. M. Hoose 3..... 300
Hemphill, G. M. Ball 1..... 300
Lackey, Humble Oil & Ref. 1..... dry

Wells completed 16
Production 2150
Dry 3

MISCELLANEOUS

Atascosa County—
Brown, Rio Bravo Oil 1..... abd
Bexar County—
McCauley, J. M. Davis 1..... wtr
Gamle, Grayburg Oil 1..... wtr
Adkins, McClanahan et al..... abd
Thompson, McClanahan et al 1..... abd
Live Oak County—
Cartwright, Houston Oil 13..... gas
Medina County—
Jargson, W. H. Cadville 1..... 5
Zavalla County—
Flower, Smith Oil-Navarro Oil 1..... abd

Wells completed 8
Production 5
Gas 1
Abandoned and water 6

RIGS AND WELLS DRILLING

LULING

Rig

Bridges, Rayor & Drexel Oil 1.

Wells Drilling

Calihan, United North & South Oil 1.
Byrd, United North & South Oil 8.
Proctor, United North & South Oil 12, 13.
Marines, United North & South Oil 18.
Rig, 1; wells drilling, 5; total, 6.

LAREDO

Rigs

Caroline-Texas, Johnson & DeTray 1.
Jennings, The Texas Co. 2.
Aviator, C. M. Ball 4, 5.
Brunie—Houston Oil 12, 13, 14, 15, 16.

Wells Drilling

Aviator, G. M. Ball 2, 3.
Caroline-Texas, Houston-Gulf Gas 2, 3.
Brunie, Houston Oil 11.
Ruigg, Rydal-Crown Central Oil 18, 19.
Survey 336, Morgan et al 2.
Survey 678, Morgan & O'Hern 3.
Survey 1,011, R. F. Duggan 1.
Puig, G. M. Ball 7.
Rigs, 9; wells drilling, 11; total, 20.

SOMERSET

Rig

Schmidt, Helvetia Oil 2.

Wells Drilling

Langley, Witherspoon Oil 2.
Weimer, Helvetia Oil 12.
Harvey, Frontier Oil 12.
Rig, 1; wells drilling, 3; total, 4.

ROCKDALE-MINERVA

Rigs

Gaither, Bowman Oil 5.
Fee, Roundtree et al 10.
Hamilton, Anchor Oil 8, 10.

Wells Drilling

Hamilton, Anchor Oil 8.
Coulter, Clear Lake Oil 6.
Gaither, Rockdale Dev. 2.
Chambers, Lucky & Gamble 2.
Hallaman, Glass Bros. 2.
Great Western, Republic Oil 1.
Rigs, 4; wells drilling, 6; total, 10.

JIM HOGG COUNTY

Rig

Martinez, Killiam 27, 28.

Wells Drilling

Holbein, O. W. Killiam 29, 30.
——, Andrews Pet. 1.
Holbein, Kisselman & Stalbans 24, 25.
Martinez, Magnolia Pet. 9, 10.
Merchant, Magnolia Pet. 3.
Rigs, 2; wells drilling, 8; total, 10.

LOCKHART

Rigs

Lackey, Humble Oil & Ref. 2, 3.
Beaty, The Texas Co. 15.
Allen, C. H. Houston 1.
Hemphill, G. M. Ball 2.

Wells Drilling

Beaty, Gulf Production 37, 38.
Beaty, The Texas Co. 14.
Brewer, Witherspoon Oil 31.
Crenshaw, J. M. Hooser 4, 5.
Cardwell, C. N. White 8.
Cardwell, Glasscock Bros. 2.
Storey, Gulf Production 1.
Cardwell, B. A. Johnson 3.
Riddle, Gulf Production 14, 15.
Rigs, 5; wells drilling, 12; total, 17.

NORTH LA.-ARKANSAS

Summary of Field Operations

Dist.—	Comp.	Prod. Dry	Gas	Rigs	Drg.	Ttl.	
Union Co., Ark.	38	5,115	8	9	24	74	98
Ouachita Co., Ark.	27	1,815	10	6	10	28	38
Nevada Co., Ark.	0	0	0	0	3	2	5
Stephens Co., Ark.	1	0	1	0	0	4	4
Bellevue, La.	2	17	0	0	1	0	1
Caddo, La.	5	1,528	0	1	15	13	28
La. wildcats	13	105	7	3	14	31	45
Ark. wildcats	8	10	7	0	6	19	25
Total Nov.	94	8,590	33	19	73	171	244
Total Oct.	141	19,462	46	16	83	292	375
Difference	47	9,862	13	3	10	121	131

WELLS COMPLETED

UNION COUNTY, ARKANSAS

3-16-15 Lyell, Amerada Pet. Co. 12.. dry
10-16-15 Lawton, Bailey & Trimble 3. 250
8-16-15 Bradford, Broderick & Calvert 3 . . . . . gas
13-16-16 Murphy, Brooks Trustee 1.... 800
18-17-14 Ezell, Sam Cook 1..... dry
7-16-15 Tatum, Rowe Daniels 6..... 300
15-16-15 Murphy, Estes et al 2..... 250
15-16-15 Murphy, Eason et al 5..... 125
1-16-16 McMullen, Gulf Ref. Co. 1..... 15
6-16-15 S. M. Werner, Gulf Ref. Co. 42 75
6-16-15 McClanahan, Imperial Oil & Gas Co. 12 800
6-16-15 McClanahan, Imperial Oil & Gas Co. 11 . . . . . gas
3-16-15 Fee, J. S. Lyell 13..... 200
7-16-15 Murphy, Lion Oil & Ref Co. A-11 150
8-16-15 Murphy, Lion O. & R. Co. G-1 dry
4-16-15 Flenniken, Moco Oil Co. 3... 115
7-16-15 Hatfield, Magnolia Pet. Co. 7 120
7-16-15 Hatfield, Magnolia Pet. Co. 6 gas
10-16-15 Lawton, Mazda Oil Co. R-5.. gas
12-16-17 N. B. Scott, Magnolia Pet. Co. 2 . . . . . dry
4-16-15 Wingfield, McDonald 1..... 70
17-16-15 Harrell, Nat. Gas & Pet. Co. B-4 300
18-17-14 Tufts, Nat. Gas & Pet. Co. 1 dry
7-16-16 Murphy, Nat. Gas & Pet. Co. F-4 . . . . . gas
7-16-15 McGrew, Nat. Gas & Pet. Co. 2 40
24-17-14 Murphy, Ohio Oil Co. 1.... dry
6-16-15 Ferguson, Parrish et al 3.... 60
1-16-17 Hodges, Rutledge Tr. 1..... 350
16-16-15 Cook, Simms Oil Co. 3..... 50
16-16-15 Cook, Simms Oil Co. 11..... 100
22-16-16 Dumas, Smitherman-McDonald 1 15
3-16-15 Graves, Southern Crude Oil Co. 8 130
3-16-15 Hays, Sun Co. 19..... gas
6-16-15 McClanahan, Sure Oil Co. 5.. 200
15-16-15 Murphy, Sure Oil Co. 3..... dry
3-16-15 Alphin, The Texas Co. 9..... dry
3-16-15 Graves, The Texas Co. 7.... gas
6-16-15 Wilson, Therman et al 6..... 600

Wells completed 38
Production 5115
Dry 8
Gas 9
Gas production 185,008,000

OUACHITA COUNTY

34-15-15 Snyder, Ark. Fuel Oil Co. 9.. gas
33-15-15 Berry, J. E. Crosbie 10..... gas
22-15-17 Riley, Hall & Williams 1.... dry
6-16-15 Flannigan, Humble O. & R. Co. 6 140
5-16-15 Umsted, Humble O. & R. Co. 6 130
31-15-15 Laney, Humble O. & R. Co. 9. dry
26-15-15 Arnold, Humble O. & R. Co. B-6 27
28-15-15 Hildebrandt, Humble O. & R. Co. 9 250
25-15-15 Forest City Box Co., Lion Oil & Ref. Co. 1 . . . . . dry
31-15-15 Laney, Nat. Gas & Prod. Co. 9 dry
27-15-16 Arnold, Ohio Oil Co. 4..... 25
29-15-15 Goodwin, Ohio Oil Co. 6..... 100
31-15-15 Brister, Pure Oil Co. 10..... 140
5-16-15 Goodwin, J. B. Lease, Standard Oil Co. 9 . . . . . gas
26-15-15 Martin, Sou Crude Oil Prod. Co. 2 . . . . . dry
5-16-15 Hill, Sure Oil Corp. 2..... dry
29-15-15 N. B. Murphy, Simms Oil Co. 6 200
32-15-15 Umsted, Standard Oil Co. 28. 230
32-15-15 Umsted, Standard Oil Co. B-6 300
31-15-15 Laney, T. & P. Coal & Oil Co. 6 . . . . . dry
34-15-15 Johnson, The Texas Co. 6.... 73
27-15-15 Watts, The Texas Co. 1..... gas
4-16-15 Umsted, Woodley Pet. Co. 8.. gas
26-15- 5 Watts, J. W. White 1..... dry
32-15-15 Berg, Wilroy et al 2..... 200
35-15-15 Langley, Woodley Pet. Co. 1. dry
35-15-15 Langley, Woodley Pet. Co. 2.. dry

Wells completed 27
Production 1815
Dry 10
Gas 6
Gas production 145,000,000

STEPHENS FIELD

20-14-19 Trimble, Humble O. & R. Co. 1 dry

CADDO PARISH

23-22-15 Worley, Dixie Oil Co. 1..... 5
9-17-16 Florsheim, Glassell & Myers 1 gas
15-21-15 Huckaby, Odell & Lawton 5...1,500
22-22-15 Jolley, Shamut Pet. Co. 3.... 8
5-21-15 Mabry, The Texas Co. 8..... 16

Wells completed 5
Production 1528
Dry 0
Gas 1
Gas production 15,000,000

COTTON VALLEY DISTRICT

15-21-10 R. R. Cox, Fortuna Oil Co. 4.. 150
27-21-10 Jackson, La. Oil & Ref. Co. 2 75
27-21-10 Gray, Ohio Oil Co. 18..... 80
27-21-18 Gray, Woodley Pet. Co. B-2.. 27

Wells completed 4
Production 232
Dry 0
Gas 0
Gas production 0

LOUISIANA WILDCATS

Bossier Parish—
9-18-11 Webster, Simms Oil Co. 1.... dry
18-18-11 Hobbs, Square Deal Oil Co. 1.. dry
25-16-12 Hodges, J. S. McCullough 2.. 15

Grant Parish—
20-9-1e Holmes, Dowling-McCurry 1.... dry

LaSalle Parish—
13-10-1e Urania, Ayers et al 1..... 50
19-10-2e Urania, Urania Pet. Co. 9.... 40

Lincoln Parish—
13-20-3w Barrett, Palmer & Bickley 2.. dry

Union Parish—
6-23-2w W. M. Jones, R. U. Rhodes 1 dry
33-23-1w Frost Lbr. Syndicate, Gulf Ref. Co. 1 . . . . . dry
16-21-4e Union Parish School Board, Nat. Gas Prod. Co..... gas
8-20-4e Forest, Ruston Drilling Co. 1 gas

Ouachita Parish—
4-19-5e Woodley, Carson Carbon Co. 1 gas

Winn Parish—
5-12-1w Rowland, Ohio Oil Co. 1.... dry

Wells completed 13
Production 105
Dry 7
Gas 3
Gas production 25,500,000

Bellevue Field—
15-19-11 Fee, Louisiana Oil & Ref. Co. D-19 5
15-19-11 Fee, Louisiana Oil & Ref. Co. D-20 12

Wells completed 2
Production 17
Dry 0
Gas 0
Gas production 0

ARKANSAS WILDCATS

Calhoun County—
29-12-15 Eagle Lbr. Co., Murdock et al 1 . . . . . dry
Columbia County—
3-18-20 Pearce, Greason et al 1..... dry
36-15-20 Rhinehart, Magnolia Pet. Co. 4 10
Clark County—
35-10-20 Burroughs, Southern Drilling Co. 1 . . . . . dry
Hempstead County—
32-11-24 Clarke, J. H. Wooten 1..... dry
Miller County—
11-17-28 Dickerman, Humble Oil & Ref. Co. 1 . . . . . dry
Nevada County—
10-14-21 Drake, Smitherman - McDonald 3 . . . . . dry
5-14-20 Calloway, Steele et al 1..... dry

Wells completed 8
Production 10
Dry 7
Gas 0
Gas production 0

DRILLING OPERATIONS

UNION COUNTY

Rigs

1-16-17 LaGrone, Ark. Fuel Oil Co. 8.
17-16-15 Cook, J. W. Clark 7.
9-16-15 Palmer, J. W. Clark 5.
7-16-15 Tatum, Rowe Daniels A-1, 7, 8.
1-16-16 Prim, Gulf Ref. Co. 5.
1-16-17 Anderson, Johnson Drilling Co. 3.
8-16-15 Bilyew, Lion Oil & Ref. Co. 5.
7-16-15 Murphy, Lion Oil & Ref. Co. A-6.
17-16-15 Harrell, Little Fay Oil Co. 4.
3-16-15 Fee, J. S. Lyell 12.
12-16-17 N. B. Scott, Magnolia Pet. Co. 3.
12-16-17 R. O. Scott, Magnolia Pet. Co. 3.
16-17-14 Moody, Pat Marr 1.
5-16-15 Flenniken, Moco Oil Co. 7, 9, 11.
9-16-15 T. C. Murphy, Murphy Oil & Gas Co. 7.
7-16-15 T. D. Murphy, Roxana Pet. Corp. 4.
7-16-15 Lawton, Southern Crude Oil Prod. Co. 3.
9-16-15 Murphy, Stewart et al 4.
18-17-14 Ezell, Jim Stock B-2.
15-16-15 Murphy, Sure Oil Co. 4.

Wells Drilling

4-16-15 Calloway, Amerada Pet. Corp. 5.
6-16-15 Flenniken, Amerada Pet. Corp. 11.
15-16-15 Murphy, Anderson et al 2.
24-18-16 Coombs, Carnahan et al 1.
18-17-14 Moodey, Clements Oil Co. 4.
8-16-15 James, Crawford & Sebastian 6.
1-16-16 Primm, Custer & Nash 1.
15-16-15 Murphy, Eason et al 6.
6-16-15 Flenniken, Federal Pet. Co. 5.
7-16-16 Howard, Ferguson Drilling Co. 1.
31-16-17 Hodges, W. H. Gilliland 2.
16-16-16 Saxon, Fitzwater et al 1.
5-18-14 J. A. Rowland, Grimes & Jones 1.
7-16-17 T. D. Murphy, Gulf Ref. Co. 3.
13-16-13 Howard, Gulf Ref. Co. 1.
6-16-16 Werner, Gulf Ref. Co. 43.
3-16-15 Graves, Hickman et al 12.
10-16-15 Giller, Hollifield et al 3-A.
3-16-15 Flenniken, Humble Oil & Ref. Co. 7.
16-16-15 Cook, E. M. Jones 3.
10-16-15 Lawton, E. M. Jones 2.
34-19-11 Fowler, Kampeter et al 1.
17-16-15 Hinshaw, Keene & Woolf 2.
3-16-15 Williams, Kennebrew et al 1.
16-16-15 Le Croy, Lion Oil & Ref. Co. 2.
3-16-15 Graves, Lion Oil & Ref. Co. 9, 10.
7-16-15 Murphy, Lion Oil & Ref. Co. A-7, A-10, A-12.
31-16-15 Davis, Liberty Oil Co. 2.
8-16-15 Murphy, Lion Oil & Ref. Co. C-5.
8-16-15 Hardy-Murphy, Lion Oil & Ref Co. 6.
4-16-15 Saxon, Livingston et al 1.
7-16-15 Hatfield, Magnolia Pet. Co. 8, 9.
8-16-17 Hisseler, Magnolia Pet. Co. 2.
1-16-17 Stout Lbr. Co., Magnolia Pet. Co. 4.
5-16-15 Flenniken, Moco Oil Co. 5, 6.
4-16-15 Hays, Murdock et al 7.
17-16-15 Harold, Nat. Gas & Pet. Co. B-5
10-16-15 Lawton, Nat. Gas & Pet. Co. C-3
8-16-15 Murphy, Nat. Gas & Pet. Co. D-3
10-16-15 Pate, Ohio Oil Co. 12.
6-16-15 Murphy, Simms Oil Co. A-1.
10-16-15 Giller, Phillips Pet. Co. 11.
7-16-15 Thompson, Phillips Pet. Co. 2.
1-16-15 McDonald, Penguin Oil Co. 6.
6-16-15 Meriwether, Pure Oil Co. 7.
16-16-15 Cook, A. H. Ramage 2.
8-16-15 Flanniken, Roxana Pet. Corp. C-5.
16-16-15 Murphy, Simms Oil Co. A-1.
3-16-15 Graves, Southern C. O. P. Co. 9.
3-16-15 Lyell, Southern C. O. P. Co. 7.
1-16-17 MacGraw, Snowden & McSweeney 1.
8-16-15 J. H. Alphin, Standard Oil Co. 23.
36-17-16 Goodwin, Standard Oil Co. 5.
9-16-15 M. W. Hardy, Standard Oil Co. 28.
28-16-14 Davis, Sun Oil Co. 1.
6-16-15 Hatfield, Sun Oil Co. 5.
1-16-16 McClanahan, Sun Oil Co. 1.
3-16-15 Alton, The Texas Co. 10.
3-16-15 Graves, The Texas Co. 11, 12.
4-16-15 Hays, The Texas Co. 4.
12-16-16 Houston, Thurman et al 1.
17-16-15 Murphy, Osage Oil Co. 6.
8-16-15 Bilyew, Unity Pet. Co. 8.
3-16-15 Roper, Unity Pet. Co. 14.
7-17-14 Lyons, Wingfield et al 3.
18-17-14 Tuffs, Wingfield et al 1.
12-16-16 Kane, Vance et al 1.
16-16-14 Goodwin, ward et al 1.

Shut Down

15-16-15 Giller, Amerada Pet. Corp. 5.
8-18-12 Garner, Bonderant et al 1.
18-16-17 Hodges, Bostick Drilling Co. 1.
16-17-14 Doss, Braswell et al 1.
4-19-16 Fletcher, Doern et al 1.
9-17-14 Kelly, Dobbs et al 1.
18-16-15 Murphy, George & Jones 5.
18-16-15 Smith, F. C. Henderson 2.
3-16-15 Graves, Hickman et al 9.
19-16-15 Murphy, Keene & Wolf 4.
7-16-15 Murphy, Lion Oil & Ref. Co. C-9.
8-16-15 Murphy, Lion Oil & Ref. Co. G-1.
3-16-15 Fee, J. S. Lyell 11.
17-17-14 Graves, Pat Marr 1.
10-16-15 Lawton, Mazda Oil Corp. R-4.
4-16-15 Hays, Murdock et al 2.
4-17-14 Perdue, Norris et al 1.
9-16-16 Parnell, Oils et al 3.
11-16-18 Barnett, G. H. Pace 1.
7-16-15 Murphy, Page et al 1, 6.
9-17-16 Dumas, Raines et al 1.
10-16-15 Lawton, Sam Richardson 5.
8-16-15 Flanniken, Roxana Pet. Co. 1.
8-17-14 Brown, Russell et al 1.
6-16-16 Holloway, Smitherman-McDonald 1.
3-16-15 Hays, Sun Oil Co. 18.
18-17-14 Allen, Zoder et al 5.
12-16-17 McGraw, The Texas Co. 1.
11-16-15 Hicks, Ward et al 1.
Rigs, 24; wells drilling, 104; total, 128.

OUACHITA COUNTY

34-15-16 Turnage, Ark. Drilling Co. 1.
5-16-15 Goodwin B, Gulf Ref. Co. 10.
33-15-15 Umsted, Gulf Ref. Co. A-18.
31-15-15 Laney, Houston Oil Co. 11.
22-15-17 Goodwin, Humble Oil & Ref. Co. 1.
28-15-15 Hildebrandt, Humble O. & R. Co. 3.
6-16-15 McClanahan, Imperial Oil & Gas Co. 7, 9.
28-15-15 Snowhill Church, Kouri et al 2.
5-16-15 Bettie Clawson, Magnolia Pet. Co. 11.
5-16-15 Umsted, Marine Oil Co. 9.
27-15-16 Lewis, Ohio Oil Co. 6.
33-15-15 Joyce, Phillips Pet. Co. 14, 18.
34-15-15 Johnson, Phillips Pet. Co. 8.
25-15-17 Ferry, Reynolds et al 1, 2.
28-15-15 Hildebrandt, Simms Oil Co. 5.
31-15-15 F. A. Laney, Simms Oil Co. 10, 11.
29-15-15 N. B. Murphy, Simms Oil Co. 7.
32-15-15 R. L. Bennett Lease, Standard Oil Co. 9.
6-16-15 Flannigan, Superior Oil Co. 2.
33-15-15 Berry, The Texas Co. 10, 16.
34-15-16 Johnson, The Texas Co. 8.
4-16-15 Fee, Sid Umsted 3.
4-16-15 Umsted, Woodley Pet. Co. 2.

Rigs

26-15-16 Arnold, Humble Oil & Ref. Co. B-7.
6-16-15 Flannigan, Humble Oil & Ref. Co. 9.
31-15-15 H. Laney, Humble Oil & Ref. Co. 4.
35-15-17 Bettie Clawson, Magnolia Pet. Co. 3.
5-16-15 J. Goodwin, Magnolia Pet. Co. 5.
25-15-17 Smith, McCorkle et al B-2.
27-15-16 Hardin, Penguin Oil Co. 4.
28-15-15 Brister, Pure Oil Co. 11.
27-15-15 Reynolds, Roxana Pet. Corp. 2.
6-16-15 Flannigan, Superior Oil Co. 3.

Shut Down

32-15-15 Rhoten, Bailey & Murray B-7.
33-15-15 Berry, J. E. Crosbie 12.
3-16-15 Williams, Howell et al 5.
35-15-17 Bettie Clawson, Magnolia Pet. Co. 2.
5-16-15 J. Goodwin, Magnolia Pet. Co. 5.
4-13-17 Higgins, Neibert et al 1.
27-15-16 Hardin, Penguin Oil Co. 3.
34-15-15 Johnson, Phillips Pet. Co. 7.
28-15-15 Berg, Roxana Pet. Corp. A-4.
27-15-15 Reynolds, Roxana Pet. Corp. 1.
34-15-15 Powell, Standard Oil Co. 6.
33-15-15 Umsted, Standard Oil Co. 12, B-5.
30-15-15 Johnson, Sun Oil Co. 5.
34-15-15 Snyder, Sure Oil Corp. 2.
28-15-16 Hughes, Sutton et al 9.
33-15-15 Berry, The Texas Co. 14.
22-14-17 Yarbrough, Vandiver et al 1.
Rigs, 10; wells drilling, 45; total, 55.

COTTON VALLEY DISTRICT

Rigs

24-21-10 Pardee, Alabama Pet. Co. A-4, B-2.
13-21-10 Bodcau, Louisiana Oil & Ref. Co. 4.
28-21-10 Nelson, Louisiana Oil & Ref. Co. 3.
15-21-10 Bodcau, Ohio Oil Co. 32.
22-21-10 Bank of Cotton Valley, Ohio Oil Co. 2.
23-21-10 W. Cox, Ohio Oil Co. 1.
26-21-10 Gray, Ohio Oil Co. 3, 19, 21.
23-21-10 Holloway, Ohio Oil Co. 2.
15-21-10 W. E. Hodges, Ohio Oil Co. 2.
27-21-10 Sandlin, Ohio Oil Co. 3.
28-21-10 Gleason, Tidal Oil Co. 2.
26-21-10 Gray, Woodley Pet. Co. 4.

Wells Drilling

8-20-10 Bible, Fortuna Oil Co. 1.
23-21-10 I. Cox, Fortuna Oil Co. 2.
20-23-10 Weghost, J. F. Giles Tr. 1.
22-21-10 R. R. Cox, Humble Oil & Ref. Co. 1.
21-21-10 Burrow, Humble Oil & Ref. Co. 1.
27-21-10 Josey & Massey, R. U. Morten 1.
26-21-10 Gray, Ohio Oil Co. 20.
22-21-10 A. J. Hodges, Ohio Oil Co. 1.
27-21-10 Sandlin, Ohio Oil Co. 2.
16-21-10 Sidney, Ohio Oil Co. 5.
23-21-10 Davis, Palmer Corp. 1.
10-19- 9 Lunsford, Victor Wenzel 1.
27-21-10 Gray, Woodley Pet. Co. B-3.

Shut Down

13-21-10 Bodcau, Humble Oil & Ref. Co. B-5.
22-21-10 Hortman, McDowell et al 1.
Rigs, 15; wells drilling, 15; total, 30.

STEPHENS FIELD

Wells Drilling

22-15-19 Cult, Buffalo Oil Co. 1.
22-15-15 Morgan, Buffalo Oil Co. 3.
27-15-19 Morgan, Equity Oil & Drlg. Co. 1.
3-15-21 B. F. Johnson, Magnolia Pet. Co. 1.
Wells drilling, 4.

NEVADA COUNTY FIELD

Rigs

10-14-21 Womack, Autrey Oil Co. 3.
10-14-21 McKinney, Smitherman - McDonald 6.
1-14-21 Hainie, Steele et al 1.

Wells Drilling

32-14-20 Lister Holten, Brewer et al 1.
2-14-21 Ellis, Greason et al 1.

Shut Down

10- 4-21 McKinney, Autrey Oil Co. 1.
2-14-21 Water, Greason et al 1.
11-14-21 Wallace, Steele et al 1.
10-14-21 McKinney, Zing et al 1.
Rigs, 3; wells drilling, 6; total, 9.

BELLEVUE FIELD

Rigs

15-19-11 Fee, Louisiana Oil & Ref. Corp. 27.

Shut Down

28-19-11 McDade, Osborne et al 2.

CADDO PARISH

Rigs

24-22-15 Hoss, Austin Oil Co. 26.
14-21-15 Robertshaw, Dixie Oil Co. 70.
23-22-15 Worley, Dixie Oil Co. 2.
22-21-15 Raines, Fortuna Oil Co. 22.
24-21-15 Wiley Bradford, Fortuna Oil Co. 1.
4-19-16 La. Live Stock & Plant Co., Haynes Bros. 2.
16-20-16 Ferry Lake, Gulf Ref. Co. 223.
20-20-16 Ferry Lake, Gulf Ref. Co. 224.
3-15-15 Duke Williams, Ridge Oil Corp. 1.
22-22-15 Jolly, Shawmut Pet. Co. 4.

Wells Drilling

30-19-15 Nickerson, Ark-Caddo Oil Co. 1.
10-20-16 Files, Bratcher et al 1.
33-21-16 Murphy, W. D. Chew 1.
27-22-15 Jolly, Dixie Oil Co. 1.
13-21-15 Noel, Dixie Oil Co. B-2.
13-21-15 Robertshaw, Dixie Oil Co. 53.
5-20-15 Doan Thigpen, Fortuna Oil Co. 15.
8-20-15 Levee Board, Fortuna Oil Co. 2.
17-18-16 Mitchell, Fortuna Oil Co. 1.
22-21-15 Raines, Fortuna Oil Co. 21.
29-21-15 Spell, Fortuna Oil Co. 1.
22-21-15 Raines, Lewis Oil Corp. 13.

15-21-15 Union Oil & Gas Co., Odell & Lawton 1.
1-21-15 E. K. Smith, Ohio Oil Co. 18.
29-21-15 Hobbs, Page & Caldwell 1.
13-20-15 Youree & Randolph, D. C. Richardson 1.
4-15-12 Hutchinson, Roy et al 3.
27-21-16 Stiles, Standard Oil Co. 174.
13-21-15 Raines, The Texas Co. 17.

Shut Down

24-22-15 Hoss, Austin Oil Co. 25.
22-21-16 Raines, Fortuna Oil Co. 20.
8-19-16 La. Live Stock & Plant Co., Haynes Bros. 1.
15-21-16 Files, Gulf Ref. Co. 6.
29-22-15 Caldwell, Henderson et al 1.
15-21-16 Fed. Jeems Bayou, The Texas Co. 1.
Rigs, 10; wells drilling, 26; total, 36.

LOUISIANA WILDCATS

Rigs

15-19- 7 Calhoun, Hawks et al 1.
14-23-14 Murray, Ark. Fuel Oil Co. 1.
17-18-11 Hall & Rumbough, Square Deal Oil Co. 1.
10-19- 5 Mrs. P. L. Boatner, J. P. Evans 1.
4-12-11 Jenkins, Gulf Ref. Co. A-33.
9-12-11 Wemple, The Texas Co. A-9.
9-10-2e Urania, Alexandria Urania Oil Co. 1, 2.
26-10-1e States, Alexandria Urania Oil Co. 1.
24-10-1e Russell, Davis & Meridith 1.
29-10-2e Tremont, La. O. & R. Corp. 2.
25- 8-4e Rich, Mitchell et al 1.
12-10-2e Urania Lbr. Co., Rowe et al 2.
1-19-4e Central, Palmer Corp. 1.

Wells Drilling

36-23-11 Bolinger, Atlantic Oil Prod. Co. 1.
31-23-11 Henry Rose, The Texas Co. 1.
33-12-3e Gore, Potts & Crickett Tr. 1.
26-19- 6 A. W. Hays, Gurden et al 1.
5-21- 6 Heard, Clark & Melat 1.
31- 9-6e Nichols, Ferguson & Kimbrough O. & G. Co. 1.
10-11-14 Hewitt-Ricks, Bentley et al 1.
9-12-11 Jenkins, Dixie Oil Co. 1.
32-12-15 Alexandria, Fortuna Oil Co. 1.
31-13-11 Willis Williams, Gulf Ref. Co. C-18.
13-14-4e H. Rhymes, El Dorado Chief Oil Co. 1.
25-10-1e Urania, Beckman et al 2.
4- 8-2e L. & A. O. Co., Dixie Oil Co. 2.
28-11-2e Holloway, Dowling & McMurray 1.
19-10-2e Urania, Keene & Woolf Oil Co. 1.
30-10-2e Tremont, La. O. & R. Corp. 1.
36-10-1e Doty, Cleve Love 1.
19-10-2e Urania, Urania Pet. Co. 10.
27-10-2e La. Central Lbr. Co., J. P. White 1.
11-17-7e Sullivan, R. C. Boisseau et al 1.
11-20-4e Griffin, O. L., The Texas Co. 1.
16-20- 5 Grey, United Carbon Co. 1.
23-15-3e Cordell, Culver et al 1.
36-20-4e K. Cole, Palmer Corp. 1.
6-16-5e Jones, Southern Carbon Co. 1.
29- 5-2e Barrow, Hincey & Macke 1.
7-12-10 Cont. Polly, Fortuna Oil Co. 35.
8- 7-12 Bowman-Hicks Lbr. Co., L. M. Emlet 6.
24- 5-12 Pickering Lbr. Co., Toro Pet. Co. 1.
6-10-2w Eagles, J. H. Hall 1.
23-10-1e Harper, Monroe Drlg. Co. 2.

Shut Down

18-17-11 Murff, Corbet et al 1.
7-19- 5 J. H. Cox, Triangle Drlg. Co. 1.
36-10-1e King, Craig et al 1.
22-10-2e Urania, Columbia Oil & Gas Co. 1.
16-11-2e Love, Wright et al 1.
24-18-3e Goodwin, Dickinson & Frue 1.
32-19-3e D'Arbone, Sam D. Hunter 1.
3- 4-3e Lanker O. & L. Co., Wheeler & Wilbanks 1.
Rigs, 14; wells drilling, 39; total, 53.

ARKANSAS WILDCATS

Rigs

33-16- 7 Fee, Brown et al 1.
1-17-6w Pine Prairie, Pine Prairie Oil Co. 2.
15-17-22 Gaunt, R. F. Maier et al 1.
20-18-22 Hamp Dickens, Pluto Oil Co. 1.
3-16-22 Knighton, Humble Oil Ref. Co. 1.
22-14-26 Gillespie, Munn Oil & Gas Co. 1.

Wells Drilling

25-15- 9 Benson, Gulf Ref. Co. 1.
31-15-13 Freeman Lbr. Co., Gulf Ref. Co. 1.
35-15-13 Freeman Lbr. Co., Jarrel et al 1.
29-15-14 Callon Lbr. Co., Magnolia Pet. Co. 1.
12- 9-20 Arnold, Virgil Heath 1.
35-10-20 Brown, Wheelen Oil Co. 1.
19-10-11 Mosley, Simms Oil Co. 1.
13-15-20 Brown, Hude & Aarnes 2.
36-15-20 Reinhart, Magnolia Pet. Co. 5.
30-19-18 Hays, Nat. Gas & Pet. Co. 1.
23-18-23 Robinson, Pluto Oil Co. 2.
7-19-19 Emerson, Russell & Kent 1.
4-20-21 Bodcau, Wingfield et al 1.
23-10-25 Garland, Burton et al 1.
14-11-25 Swafford, Tarver et al 1.
7- 3-10 Hinsley, Decou Oil Co. 1.
18-19-24 Allen, Ark. Fuel Oil Co. 1.
16-15-22 Reed Bodcau, Humble Oil & Ref. Co. 1.
3-20-24 Red River Land Co., Kensaw Pet. Co. 2.

Shut Down

20-15- 7 Bledsoe, Rhodes & Kirker 1.
36-12- 9 Brown, Easley et al 1.
24-15-15 Freeman Lbr. Co., Genther et al 1.
26-16-13 Freeman Lbr. Co., Harris & Bickley 1.
24-17-22 Sauter, Hargis et al 1.
20-16-12 Watts, Miller et al 1.
25-18-19 Duffer, Smith & Compton 1.
29-10-16 Owens, McNell et al 1.
35-12- 5 Ogle, McClintock & Goodka 1.
9-11-23 Sutton, Zing et al 1.
2-13-31 Allen, Grote et al 1.
10-11-31 Hawkins, Johnson et al 1.
36-15-27 Wiseman, Coplen et al 1.
Rigs, 6; wells drilling, 32; total, 38.

ROCKY MOUNTAIN AREA

WYOMING

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Muddy	0	0	0	0	0	3	3
Salt Creek	40	4,626	1	0	18	57	75
Lance Creek	1	300	0	0	0	2	2
Big Horn Basin	3	512	1	0	4	58	62
Lost Soldier	8	535	1	3	2	30	32
Rock River	3	235	0	0	0	10	10
Fremont Co.	0	0	0	0	1	33	34
Osage	0	0	0	0	5	11	16
Natrona Co.	0	0	0	0	0	17	17
Lincoln-Uintah Co.	0	0	0	0	4	13	17
Baxter Basin	0	0	0	0	2	5	7
Miscellaneous	4	0	4	0	2	36	38
Total Nov.	58	6,208	7	3	38	275	313
Total Oct.	60	6,192	7	0	42	314	356
Difference	2	16	0	3	4	39	43

MONTANA

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Sunburst	43	8,732	14	2	15	60	75
Cat Creek and Miscellaneous	5	10	4	0	7	92	99
Total Nov.	48	8,742	18	2	22	152	174
Total Oct.	46	10,084	12	4	22	172	194
Difference	2	1,342	6	2	0	20	20

UTAH

Summary of Field Operations

	Rigs	Drg.	Ttl.
Total Nov.	2	32	34
Total Oct.	2	29	31
Difference	0	3	3

COLORADO

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Nov.	5	1,050	1	1	17	94	111
Total Oct.	4	1,230	1	0	21	101	122
Difference	1	180	0	1	4	7	11

NEW MEXICO

Summary of Field Operations

Dist.—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total Nov.	25	2,862	7	0	5	135	140
Total Oct.	29	5,039	3	0	6	116	122
Difference	4	2,177	4	0	1	19	18

WYOMING

BIG MUDDY

Wells Drilling

8-33-76 Humphrey, Continental Oil Co. 38.
3-34-76 Continental Oil Co. 29.

Shut Down

2-33-76 Fenix, Continental Oil Co. 4.
Rigs, 0; wells drilling, 3; total, 3.

SALT CREEK

Rigs

13-39-79 SE, Blackstone Salt Creek 4-F.
34-39-79 SW, Mammoth Oil Co. 302.
34-40-78 NW, Mammoth Oil Co. 205.
28-39-78 NW, Mammoth Oil Co. 405.
28-39-78 NE, Mammoth Oil Co. 406.
13-38-78 SW, Wyoming Teapot Oil Co.
16-39-78 NE, Nicholaysen et al.
19-40-79 NE, Neris Oil Co. 18-A.
10-38-78 NW, Mammoth Oil Co. 202.
8-39-78 NE, Sinclair Wyoming 11.
6-39-79 NE, Mt. and Gulf 29-A.
31-39-78 SE, Teapot Dev. Co.
35-40-79 SE, Midwest Oil Co. 31-A.
1-39-79 SE, Continental Prod. Co. 11-A.
6-39-78 SE, Mt. and Gulf 8-A.
19-40-78 SE, Texas Prod. Co. 25-A.
5-39-78 NW, Carter Oil Co. 12-D.
17-39-78 SE, Argo Oil Co. N-2.

Wells Drilling

26-40-79 NE, Wyoming Oil Fields 24-L.
19-40-78 SW, Wyoming Oil Fields 33-A.
23-40-79 SW, Wyoming Asso. 33-L.
23-40-79 SW, Wyoming Asso. 34-L.
26-40-79 NW, Wyoming Asso 3-L.
14-40-79 SW, Wyoming Asso. 28-A.
1-39-79 NW, Midwest Oil Co. 3-A.
19-40-78 SW, Midwest Oil Co. 34-A.
14-40-79 NW, Midwest Oil Co. 13-A.
31-40-78 SW, Salt Creek Cons. 30-A.
2-39-79 SW, Continental Prod. Co. 4-LS.
2-39-79 SW, Continental Prod. Co. 6-A.
19-40-78 NW, Utah Oil & Ref. Co. 12-A.
23-40-79 SE, Wyoming Asso. 19-L.
35-40-79 SE, Wyoming Asso. 3-A.
24-40-79 NW, Wyoming Asso. 18.
20-40-78 NW, Wyoming Asso. 21-A.
15-40-79 NE, Wyoming Asso. 2-A.
24-40-79 NE, Wyoming Asso. 14-A.
34-40-78 SE, Salt Creek Cons. 13-L, 24-L.
11-39-79 NW, Salt Creek Cons. 33-A.
35-40-79 SW, Midwest Oil Co. 4-L.
35-40-79 SW, Midwest Oil Co. 18-L.
11-40-79 SE, Midwest Oil Co. 34-AS.
34-40-79 NE, Midwest Oil Co. 4-A.
34-40-79 NE, Midwest Oil Co. 1-A.
12-40-79 SW, Midwest & Wyo. Asso. 34-A.
30-40-78 NW, Utah Oil & Ref. 22-A.
5-39-78 NW, Argo Oil Co. 29-A.
20-40-78 NW, Texas Prod. Co. 6-A.
29-40-78 NW, Texas Prod. Co. 29-A.
5-39-78 NW, Western States O. & L. 29-A.
32-40-78 SW, Continental Oil Co. 30-A.
12-40-79 NE, Empire State Oil Co. 33-A.
25-40-79 SW, Wyoming Oil Fields 12-L.
30-40-79 NW, Wyoming Asso. 33-A.
35-40-79 NW, Wyoming Asso. 21-X.
32-40-78 SE, Texas Prod. Co. 19-A.
28-40-78 SW, Jupiter Oil Co. 27-A.
32-40-78 SW, Continental Prod. Co. 18-B.

Shut Down

10-40-79 SE, Empire State Oil 25-A.
28-39-79 NE, Mammoth Oil Co. 101.
29-39-78 NE, Mammoth Oil Co. 103.
28-39-78 NE, Mammoth Oil Co. 304.
28-39-78 SW, Mammoth Oil Co. 302.
28-39-78 NW, Mammoth Oil Co. 205.
4-38-78 NW, Mammoth Oil Co. 101.
23-39-78 NE, Evans Oil Co.
29-39-78 NW, Omaha Lusk Oil.
2-38-78 NE, Teapot Dome Synd. 34-A.
6-39-78 NE, Mt. and ulf 34-A.
34-39-78 SW, Mutual Oil Co. 35-A.
24-39-78 NW, Mutual Oil Co. 22-AS.
19-39-78 NW, Kinney Coastal 19-A.
7-39-78 SE, Continental Prod. Co. 1-DD.
15-40-79 SE, Prairie Oil & Gas 10.
Rigs, 18; wells drilling, 57; total, 75.

LANCE CREEK

Wells Drilling

3-35-65 Belle Cattle Co., Mutual Oil 7.

Shut Down

18-35-65 NE, Union Oil Co.
Rigs, 0; wells drilling, 2; total, 2.

BIG HORN BASIN

Rigs

23-44-95 Flavin, Ohio Oil Co. 1.
5-47-96 Hetzler, Ohio Oil Co. 1.
32-56-97 Howell, Occidental Oil & Gas.
19-46-98 State, Ohio Oil Co. 41.

Wells Drilling

28-44-93 NE, F. A. McPherson.
29-56-97 SW, Utah Southern Oil.
31-48-90 Tensleep, Ohio Oil Co. 2.
19-46-98 State, Ohio Oil Co. 42.
7-54-93 Garry Oil & Dev. Co.
31-43-90 SW, Utah Oil & Ref. Co. 3.
15-49-91 Shaffer & Tilley.
18-46-98 Washakie, Ohio Oil Co. 4.
28-44-93 West Zimmerman Butte Oil.
19-46-98 Meeteetsee, Midwest Ref. Co. 16-A.
8-81-100 Union Oil Co.
11-49-102 Omar Oil & Gas.
20-53-101 NE, Washington Oil & Gas.
1-44-102 T. C. Clark et al.
23-44-95 NE, Utah Oil & Ref. Co.
21-53-101 Guiterman et al.
14-48-102 Big Horn Dev. Co.
20-53-101 Taylor Brothers.
7-46-98 Washakie, Ohio Oil Co. 2.
10-55-97 Lot 42, Standard of California.
33-56-97 Cross Creek Co., Ohio Oil Co. 2.
20-46-98 Mill Iron, Ohio Oil Co. 68.
17-46-98 Washakie, Ohio Oil Co. 1.
36-58-100 Local Oil Co.
5-51-67 SW, C. M. Carroll et al.
9-54-94 SW, Wisconsin-Hines Co.
15-44-95 SW, J. L. Pierce.
North Crystal Creek, Empire Oil Co.
19-54-98 SW, Crystal Creek Synd.
32-47-100 NE, Prairie Oil & Gas.
31-48-99 SW, Midwest Ref. Co. 18.
11-49-102 T. A. Stancliff.

Shut Down

2-44-96 NE, F. A. McPherson.
5-54-93 Royal Oil & Ref. Co.
29-56-97 NE, Utah Southern Oil Co.
19-49-102 T. A. Stancliff.
35-57-97 NE, American Indian Oil Co.
4-51-100 Florence Oil Co.
3-55-97 Griffin, Allen Oil Co.
2-47-100 NE, Midwest Ref. Co.
34-56-97 Linton, Allen Oil Co.
31-45-99 NW, Kasoming Oil Co.
22-40-91 SW, Oiympus Oil Co.
17-49-91 Frontier Oil & Gas.
27-46-98 Rankin, Dickie Oil Co.
8-46-98 Grass Creek Prod.
3-56-90 Beck Petro. Co.
16-47-100 Big Horn Dev. Co.
17-46-98 Tunador Oil Co
30-56-90 Prod. & Refs.
19-51-92 Bruce Holding Co.
34-43-93 C. D. Markham et al.
2-56-97 Jones, Allen Oil Co.
12-45-97 On Time, Midwest Ref. Co.
10-54-95 SE, Westland Oil Co.
35-55-95 Westland Oil Co.
20-53-100 NE, Pittsburgh Southwestern.
5-43-91 SW, Prod. & Refs.
Rigs, 4; wells drilling, 58; total, 62.

LOST SOLIDER AND CARBON COUNTIES

Rigs

24-21-88 E. R. Goode.
25-26-89 SE, Prod. & Refs. 17.

Wells Drilling

11-26-90 Prod. & Refs. 8.
12-19-87 Mariand Oil Co.
2-19-88 Prod. & Refs. 3.
14-20-88 SE, Lake Valley Oil Co.
16-25-86 General Pet. Corp.
3-26-90 Prairie Oil & Gas 58.
6-23-88 NW, Prairie Oil & Gas 2.
3-95-88 NW, Prod. & Refs. 3.
1-26-90 Prod. & Refs. 6.
2-19-88 Prod. & Refs. 3.
26-20-88 Prod. & Refs. 1.
11-26-90 Prairie Oil & Gas Co. 59.
26-26-90 SW, Utah Oil & Ref. Co. 3.
28-26-86 Portland Wyoming 2.
19-26-90 Prairie Oil & Gas Co. 65.
34-26-88 Prairie Oil & Gas 2-C.
26-20-88 Prod. & Refs.
25-26-87 Prod. & Refs. 17.

Shut Down

14-25-89 Sherard, Ohio Oil Co.
3-26-90 Sand Hills Oil Co. 5.
9-26-86 Govt. Land, Columbia Pet. Co.
4-26-90 SE, Sand Hills Oil Co. 4.
23-26-87 SE, Marvin Oil Co.
28-26-88 Govt. Land, Columbia Pet. Co.
9-26-90 SE, Major Oil Co.
24-27-90 M. M. Armstrong.
28-26-86 Portland Wyoming.
21-26-86 Portland Wyoming 3.
26-25-89 NW, E. R. Goode.
8-25-86 NE, General Pet. 2.
Rigs, 2; wells drilling, 30; total, 32.

ROCK RIVER

Wells Drilling

1-18-78 Dutton Creek, Midwest Ref. Co.
25-22-78 Foote Creek, Kasoming Oil Co.
19-18-77 U. P., Ohio Oil Co. 3.

Shut Down

10-18-77 Carbon County Oil Co.
12-20-77 McLaughin et al.
25-16-77 Rex Dome Oil Co.
12-19-78 SW, Prairie Dog Oil & Gas.
34-20-78 SW, M. L. Lundy.
26-21-79 SE, Southwestern Pet. Co.
34-23-95 Central Pipe Line Co.
Rigs, 0; wells drilling, 10; total, 10.

FREMONT COUNTY

Rigs

15-32-95 Texas Prod. Co. 1.

Wells Drilling

24-32-95 Seal Oil Asso.
9-31-98 Martin F. Fold et al.
15-34-90 Ward Oil Co.
21- 1- 1 McDonald et al.
14-32-90 Meyers Pet. Co.
24-32-90 NW, Riverton Pet. Co.
7-27-95 Van Wyo., Prairie Oil & Gas 1.
19-27-95 Brimmer, Prairie O. & G. 2.
13-28-93 Spencer et al.
15- 6- 2 SW, Union Oil Co. 11.
10-28-92 SE, Union Oil Co.
18-28-92 Prod. & Refs. 1.
13-28-93 Prod. & Refs. 2.
15- 6- 2 SE, Union Oil Co. 12.
8-27- 3 Enos, Argo Oil Co. 8.
10-32-95 Prod. & Refs. 5.
25-27-93 American Workers Oil (Zola).

Shut Down

15- 5- 2 NW, Mack Syndicate.
36-37-94 Wyoming Syndicate.
27- 6- 3 SW, Kinney Coastal Oil Co.
6- 6- 2 SW, Union of California 2.
10-36-94 NW, Myrin Oil Co.
21- 1- 1 Bridger Oil Co.
18-27-95 Sage Creek Pet. Co.
29-27-95 Fremont Pet. Co.
14-32-95 NE, Prod. & Refs.
22- 6- 2 Miles City Oil Co.
3- 1- 2 NE, Teton Pet. Co.
4-31-98 Derby Dome Wyoming.
4-31-98 Burnside Oil Co.
15- 5- 2 Derby Dome Wyoming.
23-32-95 Prod. & Refs.
9-32-95 NE, Prod. & Refs. 2.
Rigs, 1; wells drilling, 33; total, 34.

OSAGE

Rigs

31-47-63 L. B. Hanson.
31-47-63 West Royalty Co.
Fawcett Ranch, Manlove et al.
31-46-63 Clark et al.
17-46-63 La Fleiche.

Wells Drilling

17-47-63 Wyoming Oil Co.
18-46-64 Fred Gravestead.
50-46-63 Fletcher Bros.
31-46-63 Tom Don Oil Co.
17-46-63 La Fleiche Oil Co.
8-46-63 John O'Brien.
36-46-63 John O'Brien.

Shut Down

10-45-61 Lenhart & Briggs.
11-45-65 Frederick Oil & Gas.
6-46-63 Osage Trust Co.
8-46-63 Griffith Oil Co.
Rigs, 5; wells drilling, 11; total, 16.

NATRONA COUNTY

Wells Drilling

3-33-83 Fargo Western Oil Co.
11-33-79 C. B. Mathewson.
15-32-95 Texas Prod. Co.
10-40-80 Mariand Oil Co.
15-34-87 NE, Continental Oil Co.
11-32-92 New York Oil Co.
9-35-85 New York Oil Co.
26-36-85 Midwest Ref. Co.
13-29-82 Chase, Ohio Oil Co.
20-37-80 Wyland, Texas Prod. Co.
10-35-85 New York Oil Co.
32-38-83 Wilson Dome, Mariand Oil Co.

Shut Down

23-33-79 Casper Oil & Gas Synd.
31-40-80 Comet Oil Co.
23-34-82 Bradford Wyoming Oil.
15-32-82 Bessimer Bend Dev. Co.
5-39-80 NW, Vernon Oil Co.
Rigs, 0; wells drilling, 17; total, 17.

LINCOLN AND UINTAH COUNTIES

Rigs

3-16-113 Wyoming Reserve Oil Co.
31-28-113 Tip Top Oil Co.
12-39-113 Clinton Oil Synd.
1-28-114 Cretaceous Oil Co.

Wells Drilling

32-19-116 Conger et al.
Near Afton, Great Western Oil Co.
23-31-113 Three States Oil.
3-26-113 Superior Oil Co.
14-21-117 Pacific Properties Co.
15-21-117 Pacific Properties Co.
17-27-112 Elk Horn, Western Slope Oil Co.
6-15-118 Vulcan Oil Co.
7-28-114 Charles Lackey et al.
34-27-113 Wyotah Oil Co.
3-27-113 Fawcett Interests.

Shut Down

9-26-113 Uintah-Transcontinental Co.
32-19-110 Granger Oil & Gas.
Rigs, 4; wells drilling, 13; total, 17.

BAXTER BASIN

Wells Drilling

26-17-104 SE, Associate Oil Co.
30-18-104 Midwest Ref. Co. 6-AX.

Shut Down

26-17-104 Associated Oil Co. 3.
23-17-104 SE, Associated Oil Co.
24-17-104 SE, Montical Oil Co.
8-16-104 SE, Montical Oil Co.
27-17-104 SE, Montical Oil Co.
Rigs, 2; wells drilling, 5; total, 7.

MISCELLANEOUS

Rigs

Baggs Dome, M. M. Armstrong.
26-48-64 SE, Associated Oil Co.

Wells Drilling

12-26-67 Platte River Drilling Co.
11-45-64 Reserve Oil & Gas Co.
1-44-61 SW, Osage Trust Co.
8-44-60 Briggs & Sartain.
5-51-67 C. M. Carroll et al.
28-31-68 John Ackard et al.
9-21-84 St. Marys, Prod. & Refs. 2.
20-21-80 Prod. & Refs. 13.
35-22-86 Prod. & Refs.
29-49-64 Osage Trust Co.
1-44-61 NE, Gose Syndicate.
24-26-82 NW, Foreman et al.
20-33-74 NW, Horseshoe Syndicate.
31-37-67 NW, Atlas Oil Co.
23-27-93 Associated Oil Co.
28-42-78 Seattle Synd.
Guernsey Dist., Illinois Synd.
28-42-79 Montana Giant Oil Co.
Buffalo Dist., Kinney Coastal Oil Co.
32-19-110 Johnson Oil Co.
28-47-65 NE, Gose Syndicate.
17-47-82 Steel Creek, Tarrant Synd. 2.
15-33-68 SW, Schuyler et al.
1-32-65 Manville Oil & Gas.
8-48-82 Griner, Carter Oil Co.
15-32-68 A. E. Mauft et al.
32-52-67 SW, Western Consolidated.
35-48-64 NW, L. B. Lilley et al.
20-21-80 Prod. & Refs. 11.
16-48-82 Belt, Carter Oil Co.

Shut Down

31-50-69 Roset Oil Co.
20-29-68 Nebraska Oil Co.
18-39-68 Glendo Oil & Gas.
6-28-62 Jay Em, Foreman et al.
17-48-82 Hess, Carter Oil Co. 2.
9-41-80 Newcomb et al.
Rigs, 2; wells drilling, 36; total, 38.

MONTANA

CAT CREEK

Rigs

12-15-28 NE, Schaffer Oil Co.

Wells Drilling

11-15-29 Cooke-Coolidge-Ida 1.
12-15-28 NE, Standard of California 7.
10-16-29 Center, Mid Northern Oil Co. 22.
21-16-30 Masser, Keasling Oil Co.
23-14-28 Winnet, Pacific Oil Co.
1-15-29 Custer Oil Co.
9-15-29 NE, Frantz Oil Co.
13-15-29 Wildschutz, Mid Northern Oil Co.
14-15-29 Green-Frantz Oil Corp. 10.
14-15-29 Clayton, Frantz Oil Corp. 15.
36-16-28 NE, Hardrock Oil Co.
2-15-28 Ryan, California Co.
5-15-29 Shaffer, Midwest Ref. Co.
7-15-29 WM, Hogan et al. 2.

Shut Down

10-15-29 Fifty Six Pet. Co.
15-15-30 Swartz et al.
28-16-28 Republic Peerless 1.
9-15-27 Peerless Oil Co.
Rigs, 1; wells drilling, 18; total, 19.

KEVIN-SUNBURST

Rigs

11-35- 2 Stockmans Natl. Bank.
29-35- 1 Benton, Arrowow Oil Co.
4-32- 4 Swears, Beardsley 1.
20-34- 2 McBride, Canadian American Oil.
25-36- 2 Keskin, Troy Island Oil Co.
17-35- 1 Potlatch Oil Co. 2.
30-35- 1 Stannard, Wallace Oil Co. 2.
11-35- 2 Stockmans Bank, Ohio Oil Co.
20-35- 2 Whitman, Homestake Exploration.
30-35- 2 Broadwell, Hecla Oil Co.
31-35- 1 Steel, Big West Oil Co.
2-34- 2 Steele, Bruceaun 1.
32-35- 1 Warner, Duluth Hibbings 4.
34-35- 2 Lashbaugh, Ferdig et al 7.
32-35- 1 Putnam, Kewanee Oil Co. 6.

Wells Drilling

35-35- 2 Norum, Ohio Oil Co. 9.
30-35- 1 Maughan, Ohio Oil Co. 6.
15-35- 2 Kenney, Ohio Oil Co. 2.
31-34- 1 Adams, Potatch Oil Co. 1.
20-35- 1 Bailey, Flood Watson.
21-35- 1 White, Big Three Oil Co. 2.
16-35- 2 State, Continental Oil Co. 6.
26-35- 2 Able, California Oil Co. 5.
35-35- 3 Able, Ferdig Hughes et al 2.
31-35- 1 Byrne, Fulton Oil Co. 6.
22-35- 2 Lorenson, Louis Hill 6.
36-35- 2 State, Homestake Explo. 2, 3.
22-35- 2 Storme, Maharg.
5-35- 3 F. M. Bell.
9-32- 2 Suhr, Sunburst Prod. Co.
33-34- 2 NE, Fraser Oil Co. 2.
8-34- 2 Pittsburgh Montana Oil.
32- 6- 2 Roundsley, Sunburst Oil & Gas.
24-32- 1 Shelby Syndicate.
28-37- 2 McAlphin, Spartan Oil Co.
20-35- 2 Halter, Sunburst Prod. Co.
7-34- 1 Harte, Russell et al.
18-34- 1 Skinner, Creel et al.
32-35- 1 Putnam, Keystone Oil Co.
32-36- 2 Farring, Neil Syndicate.
30-35- 1 State, Tri-State Oil 3.
9-34- 2 Falk, O'Hare et al.
14-35- 2 Hagerty, Sunburst Oil & Gas 3.
35-35- 2 Able, Sunburst Oil & Gas 1.
22-35- 2 SW, Lorenson et al.
10-35- 2 Bruins, Ohio Oil Co. 2.
2-34- 2 DeGroat, Ethridge Basin O. & G.
29-35- 1 Maughan, Sweeney Oil Co. 4.
18-30- 2 Ketley, Great Northern Prod.
2-34- 2 Shoemaker, California Co. 2.
25-35- 2 Byrne, R. C. Montana 4.
36-35- 2 State, Homestake Explo. 2.
31-35- 1 Byrne, Rose Oil Co. 11.
13-35- 2 Walt, American Prod. 3.
5-35- 2 Moore, Hub City Oil Co.
17-35- 2 Fraser, Rice Oil Co. 1.
30-35- 1 Stannard, Tri-State Oil 5.
2-34- 2 Steele, Big West Allen 3.
26-35- 2 Abell, California Co. 5.
35-35- 2 Abell, Ferdig et al 2.
4-34- 2 Norem, Glenrock 4.
22-35- 2 Lorenson, Louis Hill 6, 7.
21-35- 2 McManus, Louis Hill 2.
8-34- 2 Hurley, McDonald et al.

Shut Down

20-33- 1 Sollid, Flood Watson
31-35- 1 Bryne, Fulton Oil Co. 6.
28-35- 1 Shelby, Federal-Miller.
23-33- 1 Webb, Shelby Oil & Gas.
12-34- 1 Peterson, Lucky Forty Oil.
13-33- 2 Campbell, Campbell Synd. 5.
16-34- 2 NW, Rainbow Oil Co.
1-34- 3 NE, Sunburst Oil & Gas.
Rigs, 15; wells drilling, 60; total, 75.

MISCELLANEOUS

Rigs

Porcupine Dome, Stellar Oil & Gas.
24-14-15 Fullerton Oil & Gas.
12-10-32 Hibbard Oil Co.
4-28-30 Mid Northern Oil.
5- 1- 4 Absaroka Oil Dev. Co.
34-23- 2 Rainbow Syndicate.

Wells Drilling

18- 2-29 Prairie Oil & Gas Co.
3-13-25 SW, Minn Flatwillow.
Larson Dome, Montana Belle.
34-22- 1 Great Northern Mutual Oil.
33-19- 7 SW, Hager Stephenson Oil.
24-14- 2 Coal Creek Oil.
13-18- 2 Coal Ridge, Montana Oil & Gas.
5- 3-16 Montana Portland Oil.
33-16-28 H. H. Swartz, Jr.
9-31-19 Calfonia Co.
14-14-25 Flatwillow, A. M. Z. Synd.
32-25-30 Butler Oil & Gas.
24-20-12 Continental Prod.
17- 3-19 Snyder, Mid Northern Oil.
4-27-20 California Co.
20-24- 1 C. A. McDonald et al.
16-15-25 SW, Great Northern Mutual.
25-11-24 SW, Lincoln Oil Co.
3-37- 3 Robinson et al.
Benton Lake, Browning et al.
McDonald Creek, Wilson Fisher 2.
32-36- 2 Well Synd.
26- 1-21 NE, Barnadale Foster 1.
7- 8-87 NE, California Montana 1.
25-16-25 Gordon Campbell.
17- 3-18 NE, Gibson Land Co.
29-38-37 Glasgow Explo. Co.
13- 6-17 Mackey, Ohio Oil Co.
8-15-29 Deveraux, Deveraux Oil Co.
25- 1-21 Ainsworth, Nendigate Est., Inc.
18-30- 3 Kelley, G. N. Producers.
7-16-22 N. Gascho et al.
8-21-19 Bowes, California Co.

Shut Down

5-35-21 NE, F. G. Ostland.
27- 3-24 SE, Murray Bros. 2.
5-20-24 American Indian Oil.
36- 1-12 State, Springdale Oil Synd.
20-25- 5 Larson, Edwards et al.
2-26- 2 Jones, W. M. Edwards.
18- 2-23 SW, Securities Prod. Co.
5-20-24 NE, American Indian Oil.
35-32-32 SW, Bowdin Oil & Gas.
7-27- 7 NW, Circle Oil Co.
26-10-29 Stellar Oil & Gas.
32-30- 2 Denzer, Drake Oil Co.
21-14-28 Black Hawk Oil.
22- 2-25 McMennimem et al.
18- 6-24 Mennemier & Newman.
6-13-14 Fulton Oil Co.
26-14-20 Jackson Oil Co.
30-15-26 Winnet Shallow Oil Synd.
7-72- 1 Tri City Oil Co.
Devils Basin, Alberta Block Coal Co.
25- 2-27 Gladys Belle Oil.
Devil's Basin, Montana Central Oil.
12-11-13 Kalispell Syndicate.
6- 5-25 Grey Eagle Oil.
2-28- 2 NE,Dry Fork Oil.
22- 2-25 SE, Lake Basin Oil.
28- 8-21 Klinefelter, Absaroka Oil Dev.
8- 4-23 NE, Hoosier Oil Co.
24- 5- 8 SW, Potter Basin Oil & Gas
18-22- 3 SE, Elk Horn Oil & Gas.
10-18-2 NE, Moscow-Idaho Oil.
28-30- 2 NW, West Virginia Oil.
27-36-12 SW, Mountain Chief 2.
9-12-14 Wilder, Glenholm Oil Co. 2.
24-14-25 NW, Henry Seibert.
25-15-25 SW, Winnet Syndicate.
5- 1-24 NW, Absaroka Oil Co.
14-31- 1 NW, Dunkirk Oil Co.
22- 4-91 SW, Olympus Oil Co.
6- 2-24 SE, American Indian Oil 2.
32- 4-16 SW, Consolidated Oil & Gas.
Rigs, 6; wells drilling, 74; total, 80.

COLORADO

Rigs

10- 4-91 Knowlton, Transco-Texas Co. 4.
10- 4-91 Wick, Texas Prod. Co. 2.
8- 6-86 Dennis, Texas Prod. Co. 1.
10- 3-44 Yuma Valley Oil Co.
1- 8-68 Morrel, Petroleum Prod. Co.
17- 8-68 Fort Collins Chief Oil.
29-10-68 American Pet. Co.
12-38-70 Green, Mountain Pet. Co.
31- 9-68 Midway Oil & Gas.
12- 2-70 Mullin Synd.
27- 2-20 Rainbow Oil Dev. Co.
26- 9-69 Benson & Mitchell 1.
30- 9-68 NW, Farrel et al.
8- 9-68 NE, Union Junior Oil Co.
10- 3-44 SW, Hessick Drilling Co.
4-21-69 Continental Oil Co.
36-10-69 State, Seneca Oil Co.
13- 6-86 SE, Panuco Explo. Co.
9- 9-101 Maire, Gypsy Oil Co.

Wells Drilling

1- 9-69 Thimming, Union Oil of California.
8- 9-69 Warren, Union Oil of Colorado.
6- 7-68 Brown, Fifty-Four Oil Co.
32-20-63 Baxter, Salida Oil & Ref. Co. 2.
24- 2-103 Rigby, Midwest Ref. Co. 1.
30- 2-102 Emerald, Texas Prod. Co.
3-35-58 Las Animas Synd. 1.
23-20-69 Continental Oil Co. 567.
8- 3-91 Miller, Schaffer Oil Co.
22- 7-103 Ingram, Marland Oil Co.
18- 7-86 Babcock, Texas Prod. Co.
19-16-48 Schlots, California Co.
13-33-13 Hall-Murry Co.
5- 8-103 Gypsy Oil Co.
24- 8-69 Evans, Union of Calif.
30- 8-68 Water Co. Union of Calif.
32-10-68 Hess Union Oil of Calif.
36-10-68 State, Union Oil of Calif.
31- 5-98 Morgan, Union Oil of Calif.
4- 6-68 Webster, Douglas Oil Co.
10-24-69 Panuco Explo.
28- 3-64 Watkins, Miller Oil Co.
34- 2-69 Johnson, Roland Oil Co.
24- 4-92 French, Midwest Ref. Co.
17- 5-64 Hog Ranch, Roland Oil Co.
5- 6-68 Majestic Oil Co.
4-32-67 Tulsa Oil Leasing Co.
34- 8-68 Ruff, Victory Oil Co.
9-12-62 Ullum, Roland Oil Co.
19-28-68 Panuco Explo.
17- 8- 8 NW, Carter Oil Co.
4-45-16 Leidecker Pet. Corp.
36- 8-69 NE, Atlantic Pet. Co.
1- 9-69 NW, Great Northern Oil Co.
25- 1-69 Everhard, Boulder Oil Corp.
30-27-45 NW, Lamar Oil Co.
7- 9-79 Dumont, Union Oil of Calif.
31- 2-96 NW, White River Dev. Co.
30-10-68 Leroy, Wyoming Illinois Pet.
1- 5-65 Degan, A. A. Rollestone Oil Co.
6-10-68 Buckner, A. A. Rollestone Oil Co.
35-22-65 NE, San Carlos Oil Co.
22-12-100 Wm. Morris et al.
21- 3-91 Clark, Marland Oil Co.
6-23-52 State, Bent County Oil & Gas.
33- 8-68 Chandler, Penn. Colorado Co.
32- 8-68 Graham, Ho-Bart Pet. Co.
4- 6-68 Webster, Associated Oil Co.
30- 2-102 SE, Midwest Ref. Co.
6- 8-102 Lindquist, Midwest Ref. Co.
22- 4-92 Parkinson, Midwest Ref. Co.
36- 7-103 Smith, Midwest Ref. Co.
27- 4-92 Shaw, Midwest Ref. Co.
30- 2-102 Texas Prod. Co.
14- 1-66 Smith, Retter Oil Co.
34-17-70 Mutual Oil Dev. Co.
28-20-69 Travis, Continental Oil Co.
5-19-68 Penrose, Continental Oil Co.
12- 9-79 McCallum, Continental Oil Co.
4-20-69 Templeton, Continental Oil Co.
22-20-69 Marjo, Continental Oil Co.
10- 4-91 Transco-Knowlton, Texas Prod. Co. 3.
33- 1-91 Knowlton, Texas Prod. Co. 2.
19- 6-68 Bank, Texas Prod. Co.
9- 9-101 Maire, Gypsy Oil Co.
16-21-65 Columbia Heights Oil Co.
19-17-67 John, Mr., Red Creek Oil Co.
8- 8-102 Smith, Sun Oil Co.
13- 8-68 Hoff, Centenial & Sunset.
28- 5-91 Freeman, Texas Prod. Co.
33- 5-91 Hamilton, Texas Prod. Co.
36- 5-99 State, Prod. & Refs.
25-24-61 SW, Utah Southern Oil Co.
15-21-65 Union Oil of Colo.
3-32-12 NW, Leidecker et al 3.
28-28-32 Associated Oil of Colo.
28- 2-70 Gerhrung, Sand Hills Oil Co. 1.
32-31-65 Colorao Oil Co.
23- 6-69 Ruekvetter, Wellington Oil Co.
19- 5-69 Alps, Gateway Oil Co.
23- 9-69 Waverly, Consolidated Oil Fields Co.
32-10-68 SE, Imperial Oil Co.
25- 8-68 NE, American Pet. Corp.
1- 8-69 SE, Consolidated Oil Fields Corp.
6- 7-68 Lindemeir, Victory Oil Co.
18-20-46 Ne-No-Shee Oil Co.
13- 1-46 Yuma 2, Hessick Drilling Co.
19- 9-68 Harrwood, Great Northern Oil Co.
11- 1-44 Hildreth, Hessick Drilling Co.
24- 9-69 Hanna, Wellington Oil Co.
6- 7-68 NE, Bonner Oil Co.
17-17-64 NW, Peerless Oil Corp.
30- 4-68 NW, Panuco Explo. Co.
4-45-16 NW, Gilmore Oil Co.
Rigs, 17; wells drilling, 94; total, 111.

UTAH

Rigs

18-23-21 Metropole Oil Co.
4-22-19 Crescent Dome Pet.

Wells Drilling

19-22-21 Utah Oil Ref. Co.
23-44-95 Mountain States Pet. Co.
35-43-90 Utah Oil & Ref. Co. 2.
31-43-10 Utah Oil & Ref. Co. 2.
6-27-21 Shaffer, Midwest Ref. Co. 1.
Roselle Dist., Lakeside Oil Co.
16- 2- 5 State, Western Empire Oil.
32-42-17 Monroe Oil Co.
Diamond Fork, Gustaven Oil Co.
31-32-18 Union Oil of Utah.
27-14-19 Glockner, Utah Southern Oil.
23- 5-22 Utah Oil & Ref. Co.
4-18-28 New York State Oil Co.
7-21-19 SW, Sandberg Pet. Co.
Grand County, Bradley Synd.
25-21-16 Culbertson, Marland Oil Co.
22- 3-24 Clay Basin, Prod. & Refs. 2.

Shut Down

6-14-13 San Juan Dev. Co.
23-42-17 Monumental Oil Co.
12-19-13 Utah Oil & Ref. Co.
17- 4- 6 Ute Pet. & Utah Southern.
13- 4- 9 Castle Dale Oil Co.
27-16- 4 Producers Oil Co.
Lakeside Dome, W. R. Holmes.
Diamond Fork, Franko Utah Oil.
25-13-13 Utah Central Oil Co.
34-25-21 NW, Big Six Oil Co.
4-22-10 SE, Crescent Eagle Oil Co.
Rigs, 2; wells drilling, 32; total, 34.

NEW MEXICO

Rigs

19-36-34 SW, Sinclair & Fenton.
15-21-33 NW, Covert et al.
7-13-10 NW, Wood et al.
36-12-23 W. H. Graham.
19-16-34 SW, Crescent Eagle Oil 1.

Wells Drilling

11-18-28 SW, Illinois Prod. Co. 1.
28-18-28 NE, Illinois Prod. Co. 27, 32.
29-18-28 NE, Illinois Prod. Co. 34.
21-18-28 NE, Illinois Prod. Co. 1.
18-18-28 SE, Kersey & Conrad.
4-18-28 SE, Fite No. 1.
28-18-28 NW, Maljamar Oil Co. 12, 13.
4-18-28 NW, Danciger Oil & Ref. Co.
17-18-28 SW,Cumming 3.
4-18-28 SW, McGuigg Bros.
4-18-28 SW, McGuigg Bros.
21-18-28 SW, Cheesman et al.
17-18-28 SE, Williams Oil Co.
4-18-23 SE, Pueblo Oil Co. 2, 3, 4.
28-18-28 SW, Twin Lakes Oil Co. 6.
23-28-15 NE, E. M. Treat & Co.
27-18-28 SE, Quillin & Dumont.
15-19-25 SE, Eppenhauser et al.
14-15-17 NW, Arkansas Fuel Co.
29-17-18 T. S. Hogan.
24-10-27 NW, Karl Dresser et al.
25-11-26 SW, N. Jones.
20- 4-28 NW, Oliver Well.
16- 1-27 Ft. Sumner Oil Co.
25-17-16 Graham et al.
5- 6- 7 SW, Estancia Co.
19-16-34 W. A. Wyatt 1.
20-29-11 NE, West Coast Gaso. Co.
25-13-31 SE, Standard Pet. Co.
10- 3-17 Transport Oil Co.
6- 4-20 Woods Eddeman.
7-16- 1 Kaseman, Albu. Natl. Gas Co.
11- 9-21 Arkansas Fuel Co.
30- 3- 9 NE, Arkansas Fuel Co.
4-21-27 Olson, M. M. Miller.
15-29-11 Bloomfield Oil & Gas 6.
15-12-23 Zeigenfeld Co.
9-20-10 Lexi Oil Co.
31-32-13 Four States Oil Co.
15-23-24 California Co.
3-12-29 Bell, Marland Oil Co.
23-31-18 NW, Union Oil Co.
4-18-28 SW, Danciger O. & R. Co. 4.
11-20-29 Rawson, William Dooley.
14-15-17 NE, Arkansas Fuel Co.
16- 8-27 NW, Colorado Gas & Fuel Co.
24- 8-23 SE, Lewis et al.
30- 4- 9 NE, Red Feather Oil Co. 1.
30-14- 9 SE, Union United Oil.
25-24- 1 Continental Oil Co. 2.
33-13-35 Tilton & Cross.
16-29-11 SE, C. S. Ringle.
34-29-11 C. S. Ringle.
8-20-18 Reiff, California Co. 1.
18-17-28 SE, Bobb et al 3.
4-21-30 SW, Van Cleve & Kronen 2, 3.
17-18-28 SW, Texas Prod. Co. 2.
9-13-34 McGee, Ohean Oil Co. 1.
24-10-27 NW, R. C. Christman 1.
23-18-11 Pan-Mex. Dumas 1.
33-17-29 New Mexico Oil 1.
26-18-18 New Mexico Oil Co. 2.
25- 7- 2 Swisher & Wallace.
24-31-15 W. R. Childers.
32-25-19 Navajo Pet.
3-27-17 SW, Continental Oil Co. 2.
3-19-28 NW, Levers & Carper.
8- 2-14 Simmons et al.
10- 3-17 Transport Oil Co.
28-18-28 NE, Flynn, Welch & Yates 27.
32-18-28 NE, Flynn, Welch & Yates 28.
19-17-28 Thompson, George Bobb et al 4.
19-18-28 NE, Kiskadden-Barnett-Rhen.
17-18-28 SW, Danciger O. & R. 2.
27-18-28 Braden Oil Co. 1, 2.
17-18-28 NW, E. G. Hurst.
17-18-28 State, Danciger O. & R. 3.
9-10-28 SW, Danciger Bros.
16-15-29 NE, Inspiration Oil Co.
28-18-28 Toomey, Ohio Oil Co. 5, 6.
4-18-28 Daugherty, Ohio Oil Co. 2.
4-18-28 New State, Ohio Oil Co. 4, 5, 6.
5-18-28 New State, Ohio Oil Co. 2.
17-18-28 C. J. & W., Ohio Oil Co. 4.
31-19-28 Pruitt, Ohio Oil Co. 1.
1-20-28 Ryan, Ohio Oil Co. 1.
21-17-28 Johnson, Ohio Oil Co. 1.
1-20-27 McCullough, Ohio Oil Co. 1.
24-21-26 Tracy, Ohio Oil Co. 1.

Shut Down

Tract E, Rainbow Oil Co.
24-14-15 SW, Meadow Oil Co.
8- 6- 1 DeChaves Pet. Co.
2- 6-25 NW, Spaulding Dome Synd.
3-13-15 SW, Santa Fe Oil Co.
2- 3- 8 NW, Mitchell & Sons.
36-11-27 SW, Buffalo Roswell.
31- 3-15 NW, Wyo-Colo. Oil Co.
22-18-27 State, Oscar Howard.
24-29-11 Hubbel & Hall.
21-30-11 Home Gas Co.
2-19-26 Pechenbaugh, Eureka Oil Co.
1- 2-32 NE, Gurley Oil Co.
24-21-11 SE, Angelus Mining Assn.
21-14-15 SE, Blackstone Champion.
30-13-10 SW, Wood et al.
6-29- 9 Detroit Oil Corp.
10-29-24 NW, Eureka Oil Co.
19-20-30 NE, W. C. Wells & Son.
29-29-11 Montesuma Synd.
27-10-24 E. A. Rose.
27-11-34 J. D. Ward.
14-16-32 Cass-Elliott.
18-25-36 Holmes & Huey.
12-29-13 SW, Shiprock Oil Co.
9-30- 9 Rainbow Oil Co.
4-21-30 SW, Snowden McSweeney.
36-20-30 Yates, Keyes et al.
11-16-27 SE, Keyes et al.
16-18-28 NW, Forepton Bros.
17-18-28 SE, Williams Oil Co. 2.
18-22-27 SE, Blue Bird Oil Co.
3-22-26 NE Blue Bird Oil Co. 2.
16-13- 9 Melstead 2.
8-22- 1 Black, Albuquerque.
25-39-12 NF, Hall et al.
6-29- 9 NE, Detroit et al.
Rigs, 5; wells drilling, 135; total, 140.

WYOMING

WELLS COMPLETED

26-40-79 SE, Wyoming Asso. 19-A... 75
26-40-79 SW, Wyoming Asso. 24-A... 60
26-40-79 NW, Wyoming Asso. 19-A ... 40
26-40-79 NW, Wyoming Asso. 36-A ... 45
24-40-79 NE, Wyoming Asso. 23-A ... 5
15-40-79 NE, Wyoming Asso. 11-A ... 40
25-40-79 SW, Wyoming Asso. 32-A ... 100
26-40-79 SW, Wyoming Asso. 20-A ... 89
26-40-79 SE, Wyoming Asso. 24-A... 75
14-40-79 SE, Wyoming Asso. 35-A ... 50
2-39-79 NW, Salt Creek 31-A..... 35
6-39-78 NE, Mt. & Gulf 27-A 60
15-40-79 SE Midwest Oil Co. 36-AS... 50
35-40-79 SW, Midwest Oil Co. 30-A... 80
1-39-79 NE, Midwest Oil Co. 33-A ... 40
36-40-79 NW, Midwest & Wyo. Asso. 34-A 50
36-40-79 SW, Midwest & Wyo. Asso. 12-A 50
30-40-78 NW, Utah Oil & Ref. 3-A... 60
20-39-78 NE, Prairie O. & G. 33-A.... 129
17-39-78 SE, Argo Oil Co. 16-A..... 45
1-39-79 SE, Continental Prod. Co. 4-A 80
8-39-78 SE, Carter Oil Co. P-17 35
23-40-79 SE, Wyoming Asso. 13-A 40
34-40-79 NE, Wyoming Asso. 14-A.... 59
26-40-79 NW, Wyoming Asso. 4 60
34-40-79 SE, Wyoming Asso. 13-L ...2210
12-40-79 SW, Midwest Oil & Wyo. Asso. 34-A 59
27-40-79 SE, Midwest Oil Co. 33-A 20
35-40-79 SW, Midwest Oil Co. 31-A 50
12-40-78 NW, Mt. & Gulf 3-A 65
23-40-79 NW, Wyoming Oil Fields 34-X 30
35-40-79 SW, Midwest Oil Co. 19-L... 200
20-39-79 Mammoth Oil Co. 408 ..... dry
30-40-78 NW, Utah Oil & Ref. 36-A.. 50
26-40-79 SE, Midwest Oil 18-A..... 70
23-40-79 NE, Midwest Oil Co. 7..... 134
30-40-78 NW, Wyoming Asso. 33-A 40
11-39-79 SW, E. T. Williams 4-A..... 75
19-40-78 SE, Texas Prod. Co. 17-A.... 150
32-40-78 Texas Prod. Co. 19-A..... 30
35-36-65 Leo, Ohio Oil Co. 16 300
29-46-98 Mill Iron, Ohio Oil Co. 71.... 12
12-45-97 On Time, Midwest Ref. Co... dry
25-43-91 SW, Utah Oil & Ref. Co. 500
11-26-90 NW, Prod. & Refs. 7 ..... dry
7-26-90 NW, Prod. & Refs. 7 ..... gas
29-26-87 Prod. & Refs. 2 ..... gas
2-25-88 Prod. & Refs. 3 ..... gas
3-26-90 Prairie Oil & Gas 70 60
2-26-90 Utah Oil & Ref. 4. 300
3-26-90 Texas Prod. Co. 100
11-26-90 Prairie Oil & Gas 69-AX..... 75
11-19-78 H. & C., Ohio Oil Co. 6..... 60
2-19-78 H. & C., Ohio Oil Co. 10 175
27-42-81 Maxwell & Newcomb ..... dry
34-52-67 Duthie Oil Co. ..... dry
10-21-84 Prod. & Refs. ..... dry
34-22-86 Prod. & Refs. ..... dry

Wells completed 58
Production 6208
Dry 7
Gas 3
Gas production 27,000,000

MONTANA

WELLS COMPLETED

35-35- 2 Byrne, Beardsley Munger 3.. 25
30-35- 1 State, Essex O. & G. Co. 3...1500
30-35- 1 Byrne, Essex O. & G. Co. 9... 15
22-35- 2 Newman, California Co. 4.... 15
34-35- 2 Parker, California Co. 2 .... dry
29-35- 1 Anderson, Ferdig-Hughes 12.. 15
35-35- 2 Able, Ferdig-Hughes 1 ..... gas
34-35- 2 Lashbaugh, Ferdig-Hughes 6. dry
31-35- 1 Byrne, Rose Oil Co. 8 15
31-35- 1 Byrne, Rose Oil Co. 9 600
31-35- 1 Byrne, Fulton Oil Co. 5 60
17-34- 2 McGleen, Vander Drilling Co... dry
31-35- 2 Emmons, Dakota Mont. 2 75
22-35- 2 Lorenson, Louis Hill 5..... 157
4-35- 2 Reibe, Homestake Explo. 7... dry
2-34- 2 Steele, Elizabeth Iron & Oil Co. 100
32-35- 1 Putnam, Pan Canadian ..... dry
31-35- 1 State, Tri State Oil 2 150
30-35- 1 Stannard, Securities Co. 6... dry
25-35- 2 Stannard, Wyomont P. & R.6 20
8-34- 2 Hurley, Mansfield Kevin ... dry
34-35- 1 Jerring, McDermott et al... dry
31-35- 1 Kaiser, Andrew Oil Co. 20
30-35- 1 Maughan, Ohio Oil Co. 5.... 40
12-35- 2 Geist, Ohio Oil Co. ..... dry
27-35- 2 Philips, Ohio Oil Co. ..... dry
32-35- 1 Putnam, Kewanee Oil Co. 5 .. 20
31-35- 1 Allen, Big West Oil 16 50
29-35- 1 Bluhm, Arrow Tnts. 7..... 30
34-35- 1 Thelen, McDonald Synd..... dry
31-35- 1 Allen, Big West Oil 15..... 600
32-35- 3 Lilliers, Treasure State ..... dry
30-35- 1 Stannard, Tri State Oil 6.... 50
5-34- 1 Caine, Green Bay Oil ..... gas
31-35- 1 Byrne, Rose Oil Co. 10..... dry
32-35- 1 Caine, 56 Pet. Co. 7 20
5-34- 1 Moore, Queen City Oil 20
31-36- 1 Emmons, Dakota Montana 3..1500
36-35- 2 Homestake Explo. 2 2400
30-35- 1 Stannard, Rice Oil Co. 3....1200
35-35- 2 Able, Ferdig Hughes 2..... 20
31-35- 1 Cardson, Strang ..... dry
27-35- 2 Rock, Colonel Kevin 15
5-15-29 Taylor, Midnorthern Oil ..... dry
10-15-29 Oldham, Midnorthern Oil 21.. 10
8-15-29 Devereaux Oil Co. ..... dry
7-15-29 NW, Record Pet. Co. ..... dry
21- 7-21 Atlantic Pet. Co. ..... dry

Wells completed 48
Production 8742
Dry 18
Gas 2
Gas production 8,000,000

COLORADO

WELLS COMPLETED

31-10-68 Buckeye, Union Oil Co. ..... gas
10- 4-91 Wick, Texas Prod. Co. 1 ...1000
33- 5-91 Weyand, Texas Prod. Co. ... dry
21-20-69 Conley, Continental Oil Co.. 50
21- 4-92 Lloyd, Midwest Ref. Co..... dry

Wells completed 5
Production 1050
Dry 2
Gas 1
Gas production 25,000,000

NEW MEXICO

WELLS COMPLETED

28-18-28 NW, Maljamar O. & G. 12... 150
21-18-28 SE, Illinois Prod. Co. 23.... 150
21-18-28 SE, Illinois Prod. Co. 24 ... 125
28-18-28 NW, Illinois Prod. Co. 26 ... 100
29-18-28 NE, Illinois Prod. Co. 29 ... 100
21-18-28 SW, Illinois Prod. Co. 28... 75
18-18-28 Ragsdale, Danciger O. & R... 75
4-18-28 State, Danciger O. & R. 3 ... 100
4-18-28 Ragsdale, Danciger O. & R. 2. 100
33-18-28 Snowden Yates 3 100
34-19-28 Hogan Marland ..... dry
23-20-28 SW, Midwest Ref. Co..... dry
21-18-28 SE, Dome Oil Co. ..... dry
17-18-28 SE, V. K. F. Oil Co. 4..... 75
17-18-28 SW, V. K. F. Oil Co. 5 50
23-18-28 SW, V. K. F. Oil Co. 1 ..... dry
34-18-28 State, Cheesman et al ..... dry
8-18-28 NE, Texas Prod. Co. 100
31-18-29 Walker, Ramage et al 50
17-18-28 State, E. G. Hurst 100
17-18-28 Baisch, Danciger O. & R. ... 100
2-29-19 SE, Continental Oil Co. 16 ... dry
35- 2-29-11 Continental Oil Co. 13..... 1000
12-29-19 Continental Oil Co. 10 ..... dry
3-27-17 Continental Oil Co. 2 312

Wells completed 25
Production 2862
Dry 7

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WEBB CITY—R. C. Woods, 26.

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Government Issues Data On Crudes of Western Hemisphere

A study of the properties of typical crude oils from the producing fields of the western hemisphere has been made by the Bureau of Mines, Department of Commerce. A report includes comments, tabulated data, and individual analyses of crude petroleums typical of the producing districts of Canada, Mexico, Trinidad, Venezuela, Argentina, Colombia and Peru. For purposes of comparison, the report also contains analyses of typical crude oils from the largest producing districts of the United States.

The Bureau of Mines undertook a study of foreign crude oils for two reasons: First, foreign fields are potential sources of supply for the United States; in fact, considerable quantities of some foreign crudes have already been imported. Second, these oils are very similar in physical and chemical properties to oils found in the United States and a study of these resemblances has scientific value.

Despite the wide geographical distribution of the producing fields of Canada the Bureau found the crude oils of the Dominion to be remarkably alike. The producing districts represented by analyses in the report just issued are the Calgary Field of the Province of Alberta, the fields of the Province of Ontario, the Stony Creek Field of the Province of New Brunswick, and the MacKenzie district of the Northwest Territories by one sample from the Fort Norman well.

Mexican Crudes

The samples of Mexican crudes are divided into two groups based on the geographic position of the fields and the relative gravity of the oils. These groups are designated as the Northern heavy oil district, or Panuco district, which lies about 50 miles west of Tampico, and includes Ebano, Panuco, Caealilao and Topila, and the southern light oil district, also known as the Tuxpan or Tepetate district, which extends from Dos Bocas 45 miles southward to the Tuxpan River. Although the Topila Field is geographically in the northern heavy oil district, the oil seems to be a hybrid, intermediate in characteristics between the heavy, low cold test oils of the northern district and the lighter wax containing oils of the southern district.

The petroleum production of Trinidad centers about the famous Pitch Lake. Approximately 90 per cent of the total production of Trinidad has been yielded by fields within 7 miles of this lake, and by wells on the southwest peninsula. Except the samples from the Tabaquite Field, the samples of Trinidad crude examined have a low gasoline content. The Tabaquite Field is represented by two samples classed as "waxy crudes" and two classed as "nonwaxy" crudes. The waxy crude is quite similar to the lighter Oklahoma crudes, such as those from the Newkirk and Ponca fields of Kay County.

Argentine fields are represented by four samples: Two from the Comodoro Rivadavia Field, which is almost entirely exploited by the Argentine Government; one sample representing Government production in the Plaza Huincul Field, and one representing oil produced by Petroleo de Challaco, Ltda., in the Mendoza-Neu-

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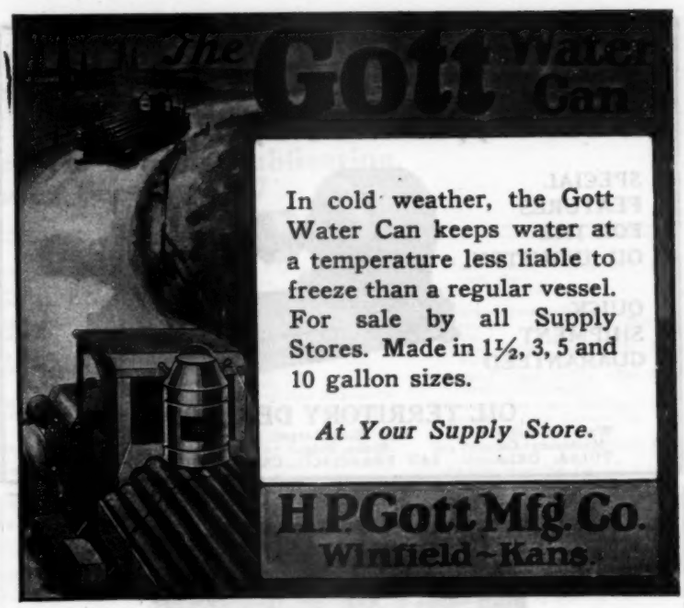
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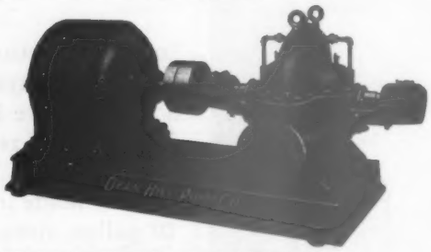

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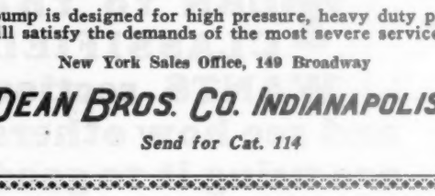

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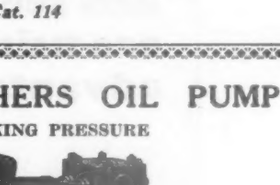

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quen Field. The Comodoro Rivadavia crude is a heavy, black oil of about 20 degrees gravity; it contains practically no commercial gasoline, as it shows only about 5 per cent of "gasoline and naphtha" by the Bureau of Mines analysis and interpretation. The samples from the Plaza Huincul and Mendoza-Neuquen Fields have a lighter gravity and higher "gasoline and naphtha" content than those from Comodoro Rivadavia. They are in many ways similar to the crude oils of northern Texas.

Venezuela

Two samples from the Lake Maracaibo Basin in Venezuela are included in this paper. They are fairly heavy, black oils, rather high in sulphur, rather low in "gasoline and naphtha," and containing considerable proportions of vacuum distillates, which do not show wax content. They show no kerosene distillate by the Bureau of Mines analysis and interpretation. The carbon residue of residuum is high, as might be expected from the large content of sulphur. The samples are similar to many of the crudes, especially the heavier high sulphur oils of Kern County, California.

Two samples from the Infantas Field of Colombia are represented. This field, in the Department of Santander, is about 18 miles east of the village of Barranca Bermeja on the Magdalena River, some 400 miles from Cartagena. The two crudes, which are black, have a sulphur content of 0.70 per cent, low pour point, low viscosity, fairly high content of "gasoline and naphtha" and considerable proportions of lubricating distillates. The carbon residue of residuum is fairly high. The wax content is inconsiderable.

The production of Peru is represented by two samples; one a "waxy" crude, called "high cold test crude," and the other a "nonwaxy" crude from the Lobitos Field. These crudes are characterized by a fairly light gravity, a high "gasoline and naphtha" content, unusually small proportion of sulphur, low viscosity and considerable proportions of commercial fractions. The carbon residue of residuum is low in view of the large proportion of total distillate.

The results of this survey are contained in Technical Paper 346, by A. J. Kraemer and L. P. Calkin, copies of which may be obtained from the Bureau of Mines, Department of Commerce, Washington, D. C.

LAYING GAS LINE FROM BALDWIN HILLS FIELD

Robertson & Co., Long Beach pipe line contractors, recently started a crew on the job of constructing a 15-mile pipe line from Baldwin Hills to Rosecrans. The line is being built for Murphy & Dillon, and will cost approximately $150,000. It will be a gas line of 10-inch pipe with a capacity of about 10,000,000 cubic feet of gas a day.

Murphy & Dillon, according to official reports, have contracted to handle the dry gas from the Standard Oil Co.'s gasoline plant at the Inglewood Field, which will be delivered to Murphy & Dillon under high pressure, and transported to the pipe line system of the Industrial Fuel Supply Co. the connection being made at Rosecrans. Murphy & Dillon do not expect to operate the line to capacity at first, but later will add the dry gas output of other Inglewood oil producers.

The Industrial Fuel Supply Co., which recently completed a 7-mile pipe line from Dominguez to Athens, will take the gas from the Murphy & Dillon line to Dominguez, and from there will distribute it through their distributing system to consumers in Los Angeles, Long Beach and elsewhere. The new line, is the second gas line to be laid to the Inglewood Field. The first line was finished several months ago, and is being used by the Midway Gas Co. and the Southern Counties Gas Co.

Murphy & Dillon officials said yesterday that the new gas line is to be rushed to completion within 30 days, to be prepared for the winter peak of fuel gas consumption, which is expected at about the beginning of the new year.

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Cordage—
Bridgeport Machine Co.
Continental Supply Co.
Frick-Reid Supply Co.
International Supply Co.
Wall Rope Works, Inc.

Core Drilling—
Longyear, E. J. Co.
Mineral Exploration Co.
Spengler Core Drilling Co.

Core Drills—Diamond—
Longyear, E. J. Co.
Sullivan Machinery Co.

Coring Tools—
Reed Roller Bit Co.
Spengler Core Drilling Co.
Wilson Oil Tools Corp.

Couplings—Flexible—
Nuttall, R. D. & Co.

Couplings—Plain End Pipe—
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.

Couplings—Seamless Steel—
Harrisburg Pipe & Pipe Bending Co.
Superior Tube Co.

Couplings—Steel for Casing, Line Pipe, Drill Pipe and Tubing—
Dayton Pipe Coupling Co.

Corrugated Sheets, Black and Galvanized (See Sheets)—

Cracking Processes—
Graver Corp.
Kellogg, M. W. Co.
Universal Oil Products Co.

Crawler Threads—
Full-Crawler Co.

Crown Blocks—
International Derrick & Equipment Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co
Moore, Lee C. & Co., Inc.
Parkersburg Rig & Reel Co.
Slater Brothers Turnbuckle Derrick Co.

Cups—Leather—
Auer, C. A.

Cutters—Pipe—
Borden Co.
Trimont Mfg. Co.

Cylinders—Compressor—
Hope Engineering & Supply Co.

Cylinder Stocks—
Barnsdall Refining Co.
Pure Oil Co.
The Texas Co.

D

Dehydrating Process—
Barnickel, Wm. S. & Co.

Dephlegmators—
Newton Process Mfg. Co.

Depletion Reports—
American Appraisal Co.

Derricks—Steel—
Carnegie Steel Co.
Emsco Steel Products Co.
International Derrick & Equipment Co.
Moore, Lee C. & Co., Inc.
O'Brien Steel Construction Co.
Parkersburg Rig & Reel Co.
Slater Bros. Turnbuckle Derrick Co.
Superior Tube Co.

Derricks—Turnbuckle—
National Turnbuckle Derrick Co.
Slater Bros Turnbuckle Derrick Co.

Diamond Core Drills (See Core Drills—Diamond)—

Diamonds for Core Drilling—
Diamond Drill Carbon Co.
Patrick, R. S.

Die Heads—Automatic Screw Cutting—
Landis Machine Co.

Die Heads—Bolt Threading—
Bignall & Keeler Machine Works.
Landis Machine Co.

Die Heads — Stationary Pipe Threading—
Bignall & Keeler Machine Works.
Landis Machine Co.
Standard Engineering Co.

Diesel Engines (See Engines)—

Dies—Pipe Threading—
Bignall & Keeler Machine Works.
Borden Co.
Cox & Sons Co.
Landis Machine Co.
Nye Tool & Machine Works.
Standard Engineering Co.

Differential Pressure Recorders (See Recorders)—

Direct Driven Pumps (See Pumps)

Disc Bits (See Bits—Disc)

Dissolved Acetylene (See Acetylene)—

Distillate—
Acme Petroleum Co.

Ditchers—Pipe Line—
Barber-Greene Co.
Buckeye Traction Ditcher Co.

Draw Works—
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
National Supply Co.
Titusville Iron Works Co.

Drillers Hose (See Hose)—

Drilling and Fishing Tools—
Acme Fishing Tool Co.
Baash-Ross Tool Co.
Bovaird & Seyfang Mfg. Co.
Bovaird Supply Co.
Bridgeport Machine Co.
Burns Tool Co.
Continental Supply Co.
Hinderliter Tool Co.
Hughes Tool Co.
International Supply Co.
Larkin & Co.
Leidecker Tool Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Spang & Co.
Star Drilling Machine Co.
U. S. Tool Co.

Drilling Engines (See Engines)—

Drilling Equipment—
Clark Brothers Co.
Hughes Tool Co.
O'Brien Steel Construction Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.

Drilling Gate Valves (See Valves)

Drilling Machines—
Bridgeport Machine Co.
Leidecker Tool Co.
Oil Well Supply Co.
Star Drilling Machine Co.

Drilling Tools (See Drilling and Fishing Tools)—

Drilling Valves (See Valves)—

Drills—Portable, Air—
Chicago Pneumatic Tool Co.

Drills—Portable Electric—
Chicago Pneumatic Tool Co.

Drive Shoes—
Bartlesville Supply Co.
Larkin & Co.

Drop-Forged Wrenches (See Wrenches)—

Drop and Seats—
Norris Brothers, Inc.

Drums (See Barrels)—

Dynamos—
Westinghouse Electric & Mfg. Co.

E

Electrical Equipment—
Fairbanks-Morse & Co.
Pyle National Co.
Wico Electric Co.

Electric Apparatus (See Apparatus—Electric)—

Electric Drilling Equipment—
Lucey Mfg. Corp.
Westinghouse Electric & Mfg. Co.

Electric Pumping and Pulling Motors (See Pumping and Pulling Motors—Electric)—

Electric Steel Castings — (See Castings—Electric Steel)—
Elevators—Casing and Tubing—
Bovaird Supply Co.
Bridgeport Machine Co.
Dunn Mfg. Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Wilson Oil Tools Corp.
Elevators—Rod—
Foggan, Geo. N.
Enamels—
Sherwin-Williams Co.
Engineers—Consulting and Contracting—
Hope Engineering & Supply Co.
Kellogg, M. W. Co.
Power Specialty Co.
Westcott & Greis.
Engineers—Fire Protection—
Foamite-Childs Corp.
Engineers—Oil Buildings—
Austin Co.
International Derrick & Equipment Co.
Engineers—Oil Treating—
Barnickel, Wm. S. & Co.
Engines—Crude Oil—
Power Mfg. Co.
Western Machinery Co.
Engines—Diesel—
Bessemer Gas Engine Co.
Busch-Sulzer Bros. Diesel Engine Co.
Foos Gas Engine Co.
McIntosh & Seymour Corp.
Western Machinery Co.
Worthington Pump & Machinery Corp.
Engines—Drilling—
Ajax Iron Works.
Bessemer Gas Engine Co.
Bovaird & Seyfang Mfg. Co.
Buda Co.
Buffalo Gasolene Motor Co.
Clark Brothers Co.
Continental Supply Co.
Franklin Valveless Engine Co.
Hercules Motor Corp.
Lufkin Foundry & Machine Co.
Pattin Bros. Co.
Power Mfg. Co.
Republic Supply Co.
Titusville Iron Works Co.
Engines—Gas—
Bessemer Gas Engine Co.
Bruce-MacBeth Engine Co.
Buda Co.
Buffalo Gasolene Motor Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Cooper, C. & G. Co.
Foos Gas Engine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering & Supply Co.
Ingersoll-Rand Co.
International Supply Co.
Jones, S. M. Co.
Miller Improved Gas Engine Co.
National Supply Co.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph Gas Engine Co.
Titusville Iron Works Co.
Waukesha Motor Co.
Western Machinery Co.
Engines—Gasoline—
Buda Co.
Buffalo Gasolene Motor Co.
Climax Motors Corp.
Continental Motors Corp.
Fairbanks-Morse & Co.
International Harvester Co. of America.
Novo Engine Co.
Waukesha Motor Co.
Western Machinery Co.
Engines—Oil—
Bessemer Gas Engine Co.
De La Vergne Machine Co.
Fairbanks-Morse & Co.
Franklin Valveless Engine Co.
International Harvester Co. of America.
McIntosh & Seymour Corp.
National Supply Co.
Oil Well Supply Co.
Reid, Joseph, Gas Engine Co.
Western Machinery Co.
Engines—Rotary Steam—
Baker Motors, Inc.
Engines—Semi-Diesel, Oil—
Chicago Pneumatic Tool Co.
Power Mfg. Co.
Engines—Steam—
Ajax Iron Works.
Baker Motors, Inc.
Frick-Reid Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Evaporators—
Newton Process Mfg. Co.
Expansion Pistons (See Pistons)—
Extinguishers—Fire—
Foamite-Childs Corp.
Amdyco Corp.

F

Fabricators for Gasoline Plants and Refineries—
Stearns-Roger Mfg. Co.
Fence—Chain Link—
Page Fence & Wire Products Association.
Filters—
Metric Metal Works.
Fire Brick (See Brick)—
Fire Extinguishers (See Extinguishers)—
Fishing Tools (See Drilling and Fishing Tools)—
Fish Tail Bits (See Bits)—
Fittings — Dropped Forged Steel
Carbondale Machine Co.
Vogt, Henry, Machine Co.
Fittings—Malleable & Cast Iron
Bovaird Supply Co.
Crane Co.
Frick-Reid Supply Co.
Kelly & Jones Co.
Walworth Mfg. Co.
Fittings—Pipe—
American Cast Iron Pipe Co.
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.
Gaso Pump & Burner Co.
Jarecki Mfg. Co.
Kellogg, M. W. Co.
Kennedy Valve Mfg. Co.
Lufkin Foundry & Machine Co.
Metric Metal Works.
Oil Well Supply Co.
Reading Steel Casting Co.
Republic Supply Co.
United Iron Works, Inc.
Fittings—Steel—
Dayton Pipe Coupling Co.
Kelly & Jones Co.
Ohio Steel Foundry Co.
Pittsburgh Reinforced Brazing & Machine Co.
Flanges—Brass, Iron and Steel—
Kelly & Jones Co.
Metric Metal Works.
Flange Unions—
Gaso Pump & Burner Mfg. Co.
Flashlights—
Delta Electric Co.
National Carbon Co.
Floating Roofs and Decks—
Chicago Bridge & Iron Works
Columbian Steel Tank Co.
Floodlights—
Pyle-National Co.
Floor Circle Braces (See Braces)
Force Feed Lubricators (See Lubricators)—
Forging Billets—
Harrisburg Pipe & Pipe Bending Co.
Heppenstall Forge & Knife Co.
Forgings—
Champion Machine & Forging Co.
Milwaukee Forge & Machine Co.
Friction Clutch Pulleys (See Pulleys)—
Fuel Oil (See Oil—Fuel)—

G

Gas and Oil Gate Valves (See Valves)—
Gas Compressors (See Compressors—Gas)—
Gas Engines (See Engines—Gas)
Gas Holders—
Chicago Bridge & Iron Works
Gaskets—
Garlock Packing Co.
McCord Radiator & Mfg. Co.
Gaskets—Fibre
Durabla Mfg. Co.
Gas Masks & Safety Appliances—
Mine Safety Appliance Co.
Gas Meters (See Meters)—
Gas Oil (See Oil—Gas)—
Gasoline—
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Gasoline—Natural—
Chestnut & Smith Corp.
Gasoline Plant Equipment—
Bessemer Gas Engine Co.
Chicago Bridge & Iron Works.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Kellogg, M. W. Co.
Marietta Mfg. Co.
Newton Process Mfg. Co.
Gas Regulator Casinghead—
Davis Regulator Co.
Gas Regulators—
Chaplin Fulton Mfg. Co.
Davis Regulator Co.
Fisher Governor Co.
Metric Metal Works.
Smith Separator Co.
Gas Scrubbers—
Newton Process Mfg. Co.
Gauge Glass—High Pressure—
Durabla Mfg. Co.
Gauge Poles—
Marsh Gauge Pole Co.
Gauges—Automatic Tank—
Oil Conservation Engineering Co.
Gauges—Pressure and Vacuum—
Bristol Co.
Foxboro Co., Inc.
Metric Metal Works.
Gauges—Test—
Metric Metal Works.
Gear Driven Pumps (See Pumps)
Gears—Cut—
Nuttall, R. D. & Co.
Gears—Reduction—
Nuttall, R. D. & Co.
Generators—
Westinghouse Electric & Mfg. Co.
Generators—Acetylene—
Oxweld Acetylene Co.
Generators—Steam—
Baker Motors, Inc.
Generators—Turbine—
Moon Manufacturing Co.
Pyle-National Co.
Westinghouse Electric & Mfg. Co.
Glass Bottles (See Bottles, Glass)
Glassware—Chemical for Laboratory Use—
Illinois Glass Co.
Governors—
Gardner Governor Co.
Governors—Boiler Feed—
Chaplin-Fulton Mfg. Co.
Fisher Governor Co.
Grey Iron Castings (See Castings)

H

Hammers—Chipping and Calking Pneumatic—
Chicago Pneumatic Tool Co.
Hammers—Riveting Pneumatic —
Chicago Pneumatic Tool Co.
Hangers—Iron and Steel—
Dodge Mfg. Corp.
Hatches—Gauge and Thief—
Oil Conservation Engineering Co.
Heat Exchangers—
Carbondale Machine Co.
Griscom-Russell Co.
Hope Engineering & Supply Co.
Newton Process Mfg. Co.
Southwestern Engineering Co., Inc.
Heat Interchangers—Fluid—
Braun, C. F. & Co.
High Pressure Gate Valves (See Valves)—
Hoists—Pneumatic, Geared and Universal—
Chicago Pneumatic Tool Co.
Yale & Towne Mfg. Co.
Hoists—Portable—
Wright Mfg. Co.
Yale & Towne Mfg. Co.
Hoists—Well Pulling—
Emsco Steel Products Co.
Hose—
Fenwick-Reddaway Mfg. Co.
Hose—Drillers—
Goodrich, B. F. Rubber Co.
Hose—Oil Suction and Discharge
Goodrich, B. F., Rubber Co.
Hose—Rubber—
Goodyear Tire & Rubber Co.
Hot Rolled Strip Steel (See Steel)
Hydraulic Gate Valves (See Valves)—
Hydraulic Jacks (See Jacks)—

I

Insulation Materials—
Celite Products Co.
Johns-Manville, Inc.
Insurance—Fire—
Oil Insurance Association.
Insurance—Tornado—
Oil Insurance Association.

J

Jacks—Hydraulic—
Bridgeport Machine Co.
Jacks—Lifting—
Templeton, Kenly & Co., Ltd.
Jacks—Pumping—
American Well Works.
Bessemer Gas Engine Co.,
Braden Co.
Frick-Reid Supply Co.
Jones, S. M. Co.
Kansas City Hay Press Co.
Spang & Co.
Jars—
Bridgeport Machine Co.
Spang & Co.
Jar Steel—
Heppenstall Forge & Knife Co.

K

Kerosene—
Acme Petroleum Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.

L

Lacquers—
Sherwin-Williams Co.
Lanterns—Electric—
Delta Electric Co.
Lanterns—Hand—
Delta Electric Co.
Lead and Mixed Metal Products—
Eagle-Picher Lead Co.
Lead in Oil—
Eagle-Picher Lead Co.
National Lead Co.
Lead Wool and Containers—
Eagle-Picher Lead Co.
Lifting Jacks (See Jacks)—
Lightning Equipment—
Climax Engineering Co.
Pyle National Co.
Westinghouse Electric & Mfg. Co.
Liquid Level Controls (See Controllers)—
Litharge—
Eagle-Picher Lead Co.
National Lead Co.
Loaders—Trucks—
Barber-Greene Co.
Long Distance Telephone—
American Telephone & Telegraph Co.
Lubricating Devices—
McCord Radiator & Mfg. Co.
Lubricating Oils (See Oils)—
Lubricators—
Ajax Iron Works.
Lunkenheimer Co.
Lubricators—Force Feed—
Mansel Brothers Co.
McCord Radiator & Mfg. Co.

M

Machine Tools—
Ryerson, Jos. T., & Son, Inc.
Manholes—Tank—
Oil Conservation Engineering Co.
Manifolds—
Reid, Joseph, Gas Engine Co.
Metal Buildings Sectional (All Types—See Buildings)—
Meters—Gas—
Foxboro Co., Inc.
Metric Metal Works.
Pittsburgh Meter Co.
Roots, P. H. & F. M. Co.
Westcott & Greis.
Meters—Gasoline—
Pittsburgh Meter Co.
Meters—Oil—
Pittsburgh Meter Co.
Molded Goods—Rubber—
Goodyear Tire & Rubber Co.
Motor Controlled Apparatus (See Apparatus—Motor Control)—
Motors—Electric—
Fairbanks-Morse & Co.
Westinghouse Electric & Mfg. Co.
Motors—Gasoline (See Engines Gasoline)—
Motor Trucks (See Trucks — Motor)—

N

Naphtha—
Pure Oil Co.
Natural Gasoline (See Gasoline—Natural)—
Natural Gasoline Plant Equipment
American Tank Co.
Chaplin-Fulton Mfg. Co.
Continental Supply Co.
Cooper, C. & G. Co.
Griscom-Russell Co.
Roots, P. H. & F. M. Co.
Smith Separator Co.
Westcott & Greis.
Nitrogen—
Linde Air Products Co.

O

Oil and Gas Pipe Line Construction—
Hope Engineering & Supply Co.
Oil Burners (See Burners—Oil)—
Oil Engines, Semi-Diesel (See Engines—Semi-Diesel Oil)—
Oil Field Equipment—
Baash-Ross Tool Co.
Baker Casing Shoe Co.
Bridgeport Machine Co.
Continental Supply Co.
Cunningham Co.
Gaso Pump & Burner Mfg. Co.
International Derrick & Equipment Co.
Iron King Mfg. Co.
Kaw Boiler Works Co.
National Supply Co.
Oil Well Supply Co.
Parkersburg Machine Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Reid, Joseph, Gas Engine Co.
Republic Supply Co.
Trumble Gas Trap Co.
Oil Filters—
Burt Mfg. Co.
Oils—Fuel—
Acme Petroleum Co.
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.
Oils—Gas—
Acme Petroleum Co.
Crown Central Petroleum Corp.
Gulf Refining Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.
Oil—Lubricating—
Barnsdall Refining Co.
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pennzoil Co.
Pure Oil Co.
Sinclair Refining Co.
The Texas Co.
Oil—Tractor—
Barnsdall Refining Co.
Gulf Refining Co.
Pennzoil Co.
Pure Oil Co.
Oiling Devices—
Lunkenheimer Co.
Oil Meters (See Meters)—
Oil Piping Equipment (See Fittings)—
Oil Reclaiming Process—
Barnickel, Wm. S. & Co.
Houston Pump & Supply Co.
Oil Refinery Equipment (See Refinery Equipment)—
Oil Savers—
Oil Well Improvements Co.
Oil Securities (See Securities)—
Oil Suction and Discharge Hose (See Hose)—
Oil Testing Instruments—
Tagliabue, C. J. Mfg. Co.
Oil Well Cementing—
Halliburton, Erle P.
Oil Well Screens (See Screens)—
Oil Well Tools—
Dunn Mfg. Co.
Hinderliter Tool Co.
Reed Roller Bit Co.
Star Drilling Machine Co.
Titusville Forge Co.
U. S. Tool Co.
Over Shots—
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Oxygen—
Linde Air Products Co.

P

Packer Release—
Acme Fishing Tool Co.
Packers—
Guiberson Corp.
Larkin & Co.
Layne & Bowler Co.
Oil Well Supply Co.
Regan Forge & Engineering Co.
Spang & Co.
Packing—
Durabla Mfg. Co.
Garlock Packing Co.
Goodrich, B. F., Rubber Co.
Imperial Belting Co.
Johns-Manville, Inc.
Paints—
Aluminum Co. of America.
Continental Supply Co.
Cook Paint & Varnish Co.
Detroit Graphite Co.
Eagle-Picher Lead Co.
Sherwin-Williams Co.
Paraffin Wax Plant Equipment—
Carbondale Machine Co.
Pipe—Cast Iron—
American Cast Iron Pipe Co.
Continental Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
International Supply Co.
U. S. Cast Iron Pipe & Fdy. Co.
Pipe—Lead Chemical and Antimonial—
Eagle-Picher Lead Co.
Pipe—Steel—
Greenspon's, Jos., Sons Iron & Steel Co.
Jarecki Mfg. Co.
Kellogg, M. W. Co.
National Supply Co.
National Tube Co.
Republic Iron & Steel Co.
Ryerson, Jos. T. & Son, Inc.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.
Pipe—Wrought Iron—
Frick-Reid Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Oil Well Supply Co.
Reading Iron Co.
Superior Tube Co.
Pipe and Nipple Threading Machines—
Bignall & Keeler Machine Works.
Cox & Sons Co.
Landis Machine Co.
Ryerson, Jos. T. & Son, Inc.
Standard Engineering Co.
Pipe Clamps (See Clamps—Pipe)
Pipe Fittings (See Fittings)—
Pipe Grips—
Larkin & Co.
Pipe Headers—
National Tube Co.
Newton Process Mfg. Co.
Pipe Line Construction Tools—
National Transit Pump & Machine Co.
Pipe Line Ditchers (See Ditchers)
Pipe Line Equipment—
Gaso Pump & Burner Mfg. Co.
Pipe Screwing Machines—
Buckeye Traction Ditcher Co.
Pipe Suspension Device—
Stearns-Roger Mfg. Co.
Pipe Threading Dies (See Dies)—
Pipe Tools—
Armstrong Brothers Tool Co.
Nye Tool & Machine Works.
Piping—Fabricated—
Kelly & Jones Co.
Midwest Piping & Supply Co.
Piping—Steel & Iron—
Crane Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Power Piping Co.
United Iron Works.
Pistons—
Guiberson Corp.
Heppenstall Forge & Knife Co.
Piston—Expansion—
Wilson Oil Tools Corp.
Pistons—Slush Pump—
Guiberson Corp.
Plain End Pipe Couplings (See Couplings—Plain End Pipe)—
Plugs—Bottom Water—
Guiberson Corp.
Polish Rods (See Rods—Polish)—
Portable Drilling Rigs (See Rigs)
Power Puller—
Jones Oil Well Reamer Co.
Power Pumps (See Pumps)—
Power Units—Portable (See Engines)—
Pre-Heaters—
Newton Process Mfg. Co.
Pulleys—Casing—
Bridgeport Machine Co.
Pulleys—Friction Clutch—
Havana Mfg. Co.
Pulleys—Wood, Iron and Steel—
Dodge Mfg. Corp.
Pulling Machines—
Iron King Mfg. Co.
National Supply Co.
Safety Pulling Machine Co.
Pumping and Pulling Motors—Electric—
Westinghouse Electric & Mfg. Co.
Pumping Equipment—
American Well Works.
Axelson Machine Co.
Gould & Mfg. Co.
Jones, S. M., Co.
Myers, F. E., Bro. & Co.
Northrup Equipment Co.
Oil Well Supply Co.
Prescott Co.
Waukesha Motor Co.
Pumping Hangers—
Bridgeport Machine Co.
Pumping Jacks (See Jacks)—
Pumping Gear Units—
Nuttall, R. D. & Co.
Pumping Powers—
Aldrich Pump Co.
Bessemer Gas Engine Co.
Buda Co.
Climax Engineering Co.
Frick-Reid Supply Co.
Jones, S. M. Co.
Kansas City Hay Press Co.
National Supply Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph, Gas Engine Co.
Spence Machine Co.
Titusville Iron Works Co.
Pumps—Air Lift—
IngersollRand Co.
Pumps—Boiler Feed—
Ajax Iron Works.
Fairbanks-Morse & Co.
Gardner Governor Co.
Oil Well Supply Co.
Worthington Pump & Machinery Corp.

Pumps—Centrifugal—
American Well Works.
Dean Hill Pump Co.
Fairbanks-Morse & Co.
Worthington Pump & Machinery Corp.
Pumps—Direct Driven—
Aldrich Pump Co.
Bessemer Gas Engine Co.
Pumps—Electric—
Prescott Co.
Pumps—Fuel Oil Service—
Aldrich Pump Co.
Blackmar Rotary Pump Co.
Northern Fire Apparatus Co.
Pumps—Fuel Oil Transfer—
Aldrich Pump Co.
Pumps—Gear Driven—
Aldrich Pump Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
Prescott Co.
Pumps—Pipe Line —
Aldrich Pump Co.
Frick-Reid Supply Co.
Gardner Governor Co.
National Transit Pump & Machine Co.
Prescott Co.
Worthington Pump & Machinery Corp.
Pumps—Power—
Aldrich Pump Co.
Dean Brothers Co.
Fairbanks-Morse & Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Myers, F. E. Bro. & Co.
National Transit Pump & Machine Co.
Novo Engine Co.
Prescott Co.
Waukesha Motor Co.
Worthington Pump & Machinery Corp.
Pumps—Refinery—
Aldrich Pump Co.
Dean Hill Pump Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Kinney Mfg. Co.
National Transit Pump & Machine Co.
Northern Fire Apparatus Co.
Worthington Pump & Machinery Corp.
Pumps—Rotary—
Blackmer Rotary Pump Co.
Northern Fire Apparatus Co.
Roots, P. H. & F. M., Co.
Pumps—Sand—
Bridgeport Machine Co.
Larkin & Co.
Pumps—Slush—
Gardner Governor Co.
Pumps—Steam —
Dean Brothers Co.
Fairbanks-Morse & Co.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Prescott Co.
Vogt Brothers Mfg. Co.
Pumps—Suction—
Gaso Pump & Burner Mfg. Co.
Pumps—Vacuum—
Bessemer Gas Engine Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Miller Improved Gas Engine Co.
Roots, P. H. & F. M. Co.
Worthington Pump & Machinery Corp.
Pumps—Water—
Aldrich Pump Co.
American Well Works.
Gaso Pump & Burner Mfg. Co.
Northern Fire Apparatus Co.
Prescott Co.
Purifiers—Oil Absorption—
Sharples Specialty Co.
Pyrometers—
Brown Instrument Co.

R

Ratchet Pipe Cutters—
Toledo Pipe Threading Machine Co.
Ratchet Pipe Threaders—
Toledo Pipe Threading Machine Co.
Ratchet Stocks and Dies—
Toledo Pipe Threading Machine Co.
Ratchet Wrenches (See Wrenches)
Reamers—
Bridgeport Machine Co.
Jones Oil Well Reamer Co.
Receiving Boxes—
Reid, Joseph, Gas Engine Co.
Recorders—Differential Pressure—
Metric Metal Works.
Refinery Equipments—
American Radiator Co.
Braun, C. F. & Co.
Carbondale Machine Co.
Chicago Bridge & Iron Works
Graver Corp.
Grimm-Russell Co.
Kellogg, M. W. Co.
Newton Process Mfg. Co.
Petroleum Iron Works Co.
Power Piping Co.
Power Specialty Co.
Ross-Meehan Foundries.
Reid, Joseph, Gas Engine Co.
Smith Separator Co.
Southwestern Engineering Co. Inc.
United Iron Works, Inc.
Universal Oil Products Co.
Vogt, Henry, Machine Co,
Walsh & Weidner Boiler Co.
Westcott & Greis.
Refinery Pumps (See Pumps)—
Refractories—Furnace, Stills and Baffles—
Botfield Refractories Co
Refrigerating Machinery—
Carbondale Machine Co.
Climax Engineering Co.
United Iron Works, Inc.
Vogt, Henry, Machine Co.
Regulators—
Fisher Governor Co., Inc.
Oil Conservation Engineering Co.
Smith Separator Co.
Rental Service—
Bridgeport Machine Co.
Reversible Clutches—
Bessemer Gas Engine Co.
Rig Irons—
Bradford Rig & Reel Co.
International Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Rigs—Drilling, All Steel—
Carnegie Steel Co.
Emsco Steel Products Co.
International Derrick & Equipment Co.
Moore, Lee C., & Co. Inc.
Rigs—Portable Drilling—
National Supply Co.
National Turnbuckle Derrick Co.
Star Drilling Machine Co.
Riser Clamps (See Clamps)—
Rods—Polish—
Bradford Motor Works.
Jones, S. M., Co.
Rods—Pull—
Axelson Machine Co.
Columbus Sucker Rod Co.
Jones, S. M. Co.
Kansas City Bolt & Nut Co.
Rods—Sucker—
Axelson Machine Co.
Columbus Sucker Rod Co.
D. & B. Pump & Supply Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Nut & Bolt Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Rods—Valve—
Jones, S. M., Co.
Roofing—
Johns-Manville, Inc.
Roofing—Tin Plates (See Tin Plates—Roofing)—
Rope Socket Metal—
Eagle-Picher Lead Co.
Rope—Manila—
Ajax Rope Co., Inc.
Bovaird Supply Co.
Republic Supply Co.
Wall Rope Works, Inc.
Rope—Wire—
Ajax Rope Co., Inc.
American Cable Co.
Bovaird Supply Co.
Broderick & Bascom Rope Co.
Bridgeport Machine Co.
International Supply Co.
Jarecki Mfg. Co.
Leschen, A & Sons Rope Co.
Wickwire-Spencer Steel Corp.
Rotary Bit Steel—
Heppenstall Forge & Knife Co.
Rotary Disc Bits (See Bits)—
Rotary Drilling Equipment—
Climax Engineering Co.
Continental Supply Co.
Frick-Reid Supply Co.
International Derrick & Equipment Co.
Link-Belt Co.
Lucey Mfg. Corp.
Luftin Foundry & Machine Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Titusville Iron Works Co.
Rotary Drive Bushings (See Bushings—Rotary Drive)—
Rotary Lines (See Rope—Wire)—
Rotary Post—
Reed Roller Bit Co.
Rotary Rock Bits (See Bits)—
Rotary Tool Joints—
Bartlesville Supply Co.
Hughes Tool Co.
Rotary Ventilators—(See Ventilators)—
Rubber Belting (See Belting)—
Rubber Hose (See Hose)—
Run Down Tanks (See Tanks)—
Rust Preventatives—
Dearborn Chemical Co.
Eagle-Picher Lead Co.

S

Sand Line Caps—
Oil Well Improvements Co.
Sand Lines—Manilla—
Ajax Rope Co., Inc.
Sand Lines—Wire—
Ajax Rope Co., Inc.
Broderick & Bascom Rope Co.
Wickwire-Spencer Steel Corp.
Sand Pumps (See Pumps, Sand)
Screens—Oil Well—
Layne & Bowler Co.
Screens—Water Well—
Layne & Bowler Co.
Screws—Temper—
Burns Tool Co.
Seamless Steel Couplings (See Couplings—Seamless Steel)—
Securities—Oil—
Pforsheimer, Carl H. & Co.
Separators—Centrifugal—
Miller, Max B. & Co.
Sharples Specialty Co.
Separators—Gas and Oil—
American Tank Co.
Smith Separator Co.
Sheet Lead—Chemical and Antimonial—
Eagle-Picher Lead Co.
Sheets—Blue Annealed—
Kansas City Bolt & Nut Co.
Sheets — Corrugated, Black and Galvanized—
American Sheet & Tin Plate Co
Ryerson, Jos. T. & Son, Inc.
Sheets—Steel—
American Sheet & Tin Plate Co.
Republic Iron & Steel Co.
Sleeves—
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.
Sleeves—Split—
Dayton Pipe Coupling Co.
Dresser, S. R. Mfg. Co.
Slush Pumps Pistons (See Pistons)—
Slush Pumps—(See Pumps)—
Smoke Stacks—
Donovan Boiler Works.
Sockets—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Spang & Co.
Sockets—Wire Rope—
Chicago Steel Foundry Co.
Solders—Bar and Wire—
Eagle-Picher Lead Co.
Spark Plugs—
Mosler Metal Products Corp.
Spears—
Acme Fishing Tool Co.
Special Steel (See Steel—Special)
Split Sleeves (See Sleeves)—
Sprockets—Power Transmission—
Ajax Iron Works.
Chain Belt Co.
Stationary Pipe Threading Die Heads (See Die Heads)—
Steam Pumps—(See Pumps)—
Steel—All Kinds—
Ryerson, Jos. T., & Son. Inc.
Steel—Alloy—
Central Steel Co.
Steel—Bit—
Central Steel Co.
Steel—Hot Rolled Strip—
Central Steel Co.
Steel—Special—
Central Steel Co.
Steel Band Wheels (See Band Wheels—Steel)—
Steel Bridges—(See Bridges)—
Steel Bull Wheels—(See Bull Wheels—Steel)—
Steel Castings (See Castings)—
Steel Couplings for Casing, Line Pipe, Drill Pipe and Tubing (See Couplings)—
Steel Crown Blocks (See Crown Blocks)—
Steel Derricks (See Derricks)—
Steel Fabricators—Structural—
Austin Co.
Braden Co.
Graver Corp.
International Derrick & Equipment Co.
Steel Fittings (See Fittings)—
Steel Pitmans—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.
Slater Brothers Turnbuckle Derrick Co.
Steel Plate Construction—
Chicago Bridge & Iron Works
Graver Corp.
Kaw Boiler Works Co.
Petroleum Iron Works Co.
Tulsa Boiler & Machinery Co.
Vogt, Henry, Machine Co.
Steel Sheets—(See Sheets, Steel)—
Steel Valves (See Valves—Steel)—
Steel Walking Beams (See Walking Beams—Steel)—
Steel Wheels and Tug Rims—
Carnegie Steel Co.
Emsco Steel Products Co.
International Derrick & Equipment Co.
Stills—
Blaw-Knox Co.
Chicago Bridge & Iron Works.
Graver Corp.
Kaw Boiler Works Co.
Kellogg, M. W. Co.
Petroleum Iron Works Co.
Vogt, Henry, Machine Co.
Stocks and Dies—
Toledo Pipe Threading Machine Co.
Structural Steel Fabricators (See Steel Fabricators)—
Stuffing Boxes—
Axelson Machine Co.
Kansas City Hay Press Co.
Sucker Rods (See Rods—Sucker—
Suction Pumps—(See Pumps)—
Sulphuric Acid—
Eagle-Picher Lead Co.
Swabs—
Gulberson Corp.
Hoffman Mfg. Co.
Swedge Nipples—
Dresser, S. R. Mfg. Co.
Harrisburg Pipe & Pipe Bending Co.
Swing Joints—
Oil Conservation Engineering Co.
Swivels—
Layne & Bowler Co.
Lucey Mfg. Corp.
Titusville Iron Works Co.

T

Tank Cars (See Cars—Tanks)—
Tank Cars Leased (See Cars)—
Tank Equipment—
Oil Conservation Engineering Co.
Westcott & Greis.
Tanks—Bolted—
American Tank Co.
Butler Mfg. Co.
Gantz Tank Co.
Maloney Tank Mfg. Co.
Parkersburg Rig & Reel Co.
Tanks—Bulk Station —
Columbian Steel Tank Co.
Graver Corp.
Tanks—Cylindrical—
Petroleum Iron Works Co.
Tanks—Elevated Steel—
Chicago Bridge & Iron Works
Tanks—Field Storage—
American Car & Foundry Co.
American Tank Co.
Donovan Boiler Works.
Graver Corp.
Kaw Boiler Works.
Kewanee Boiler Co.
Maloney Tank Mfg. Co.
Petroleum Iron Works Co.
Pittsburgh-Des Moines Steel Co.
Riter-Conley Co.
Tulsa Boiler & Machinery Co.
United Iron Works, Inc.
Tanks—Horizontal Storage—
Columbian Steel Tank Co.
Graver Corp.
Kaw Boiler Works Co.
Maloney Tank Mfg. Co.
Tanks—Run Down—
Donovan Boiler Works.
Graver Corp.
Kaw Boiler Works Co.
Newton Process Mfg. Co.
Tanks—Truck—
American Tank Co.
Butler Mfg. Co.
Columbian Steel Tank Co.
White Co.
Tanks—Underground—
Butler Mfg. Co.
Columbian Steel Tank Co.
Graver Corp.
Kewanee Boiler Co.
Pittsburgh-Des Moines Steel Co.
Tulsa Boiler & Machinery Co.
Tanks—Welded—
American Tank Co.
Chicago Bridge & Iron Works.
Gantz Tank Co.
Taper Tanks—
Hughes Tool Co.
Tapes—Measuring for Oil Gauging—
Lufkin Rule Co.
Tee Casing Heads (See Casing Heads)—
Temperature Controllers (See Controllers—Temperature)—
Temper Screws (See Screws)—
Thermometers—Indicating and Recording—
American Schaeffer & Budenberg Corp.
Bristol Co.
Foxboro Co., Inc.
Tagliabue, C. J., Mfg. Co.
Taylor Instrument Co.
Threading Machines—
Bignall & Keeler Machine Wks.
Cox & Sons Co.
Landis Machine Co.
Thread Protectors—
Spang & Co.
Tin Plates—Bright—
American Sheet & Tin Plate Co.
Tin Plates—Roofing—
American Sheet & Tin Plate Co
Tires—Automobile—
Continental Supply Co.
Tongs—
Bridgeport Machine Co.
Dunn Mfg. Co.
Wilson Oil Tools Corp.
Tongs—Back Up—
Williams, J. H., & Co.
Tongs—Break Out—
Reed Roller Bit Co.
Williams, J. H., & Co.
Tongs—Casing—
Gulberson Corp.
Tongs—Chain Pipe—
Williams, J. H., & Co.
Tongs—Pipe—
National Transit Pump & Machine Co.
Tongs—Tool Joint—
Gulberson Corp.
Hughes Tool Co.
Reed Roller Bit Co.
Tool Joints—
Bridgeport Machine Co.
Hughes Tool Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Regan Forge & Engineering Co.
Tool Joint Tongs (See Tongs)—
Tools—Fishing and Drilling (See Drilling and Fishing Tools)—
Tools — Oil Well Drilling (See Drilling and Fishing Tools)—
Torches—
Oxweld Acetylene Co.
Tractor Oil (See Oil—Tractor)—
Tractors—
International Harvester Co. of America.
Rock Island Plow Co.
Transmission Belt—Rubber—
Goodrich, B. F. Rubber Co.
Transmission Lining—
Stanley Belting Corp.
Traveling Block—
Lucey Mfg. Corp.
Regan Forge & Engineering Co.
Wright Mfg. Co.
Trenchers—Vertical Boom—
Barber-Greene Co.
Trucks—Motor—
General Motors Truck Co.
International Harvester Co. of America.
White Co.
Truck Tanks (See Tanks)—
Truck Tires (See Tires—Truck)—
Tube Cutting Machines
Cox & Sons Co.
Tubes—Boiler, Charcoal Iron—
Reading Iron Co.
Tubes—Boiler Steel—
National Tube Co.
Ryerson, Jos. T. & Son, Inc.
Tubing—
National Tube Co.
Reading Iron Co.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.
Tubing Catchers—
Dunn Mfg. Co.
Gulberson Corp.
Tubing Elevators (See Elevators, Casing and Tubing)—
Tubing Rings—
Oil Well Improvements Co.
Tubular Goods—
Oil Well Supply Co.
Republic Iron & Steel Co.
Spang, Chalfant & Co., Inc.
Tubular Goods—Wrought Iron—
Reading Iron Co.
Turbines for Lighting Equipment
Lucey Mfg. Corp.
Pyle-National Co.
Westinghouse Electric & Mfg. Co.
Turbine Generators (See Generators—Turbine)—
Turnbuckle Derricks (See Derricks)—

U

Underground Tanks—(See Tanks)
Underreamer Bit Steel—
Heppenstall Forge & Knife Co.
Underreamer Cutter Steel—
Heppenstall Forge & Knife Co.
Underreamers—
Bridgeport Machine Co.
Gulberson Corp.
Wilson Oil Tools Corp.
Unions—
Continental Supply Co.
Kelly & Jones Co.

V

Vacuum Pumps (See Pumps)—
Valuations—
American Appraisal Co.
Valves—Blow-off—
Homestead Valve Mfg. Co.
Valves—Brass and Bronze—
Chapman Valve Mfg. Co.
Homestead Valve Mfg. Co.
Kelly & Jones Co.
Lunkenheimer Co.
Reading Steel Casting Co.
Walworth Mfg. Co.
Valves—Cast Steel—
Homestead Valve Mfg. Co.
Valves—Check—
Gaso Pump & Burner Mfg. Co.
Lunkenheimer Co.
Valves—Drop Forged Steel—
Edward Valve & Mfg. Co.
Vogt, Henry, Machine Co.
Valves — Gate — High and Low Pressure—
Chapman Valve & Mfg. Co.
Continental Supply Co.
Crane Co.
Darling Valve & Mfg. Co.
Kelly & Jones Co.
Kennedy Valve Mfg. Co.
Ludlow Valve Mfg. Co.
Lunkenheimer Co.
Pittsburgh Reinforced Brazing & Machine Co.
Powell, Wm., Co.
Valves—Iron—
Lunkenheimer Co.
Reading Steel Casting Co.
Valves—Metal Pump—
Durabla Mfg. Co.
Valves—Relief—Supersensitive—
Davis Regulator Co.
Valves—Steel—
Edward Valve & Mfg. Co.
Kelly & Jones Co.
Lunkenheimer Co.
Metric Metal Works.
Pittsburgh Reinforced Brazing & Machine Co.
Powell, Wm., Co.
Reading Steel Casting Co.
Valves—Tank Vent—
Oil Conservation Engineering Co.
Valves—Working Barrel—
Atlas Ball Co.
Axelson Machine Co.
Hough, Charles N. Mfg. Co.
Northrup Equipment Co.
Oil Well Supply Co.
Varnishes—
Sherwin-Williams Co.
Ventilators—Rotary—
Swartwout Co.

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.
Walking Beams—Steel—
Moore, Lee C., & Co., Inc.
Water Gauge Cocks (See Cocks)—
Water Pumps (See Pumps)—
Water Softeners and Filters—
Graver Corp.
Water Well Screens (See Screens)
Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.
Weight Indicators—
Hughes Tool Co.
Welded Tanks—(See Tanks)—
Welding Accessories—Electric—
Wilson Welder & Metals Co.
Welding and Cutting Apparatus—
Oxweld Acetylene Co.
Welding Machines—Electric—
Wilson Welder & Metals Co.
Welding Supplies
Oxweld Acetylene Co.
Welding Wire—
Frick-Reid Supply Co.
Oxweld Acetylene Co.
Page Fence & Wire Products Association.
Wilson Welder & Metals Co.
Well Drilling and Fishing Tools—(See Drilling and Fishing Tools)—
Well Drilling Equipment (See Drilling Equipment)—
Well Shooting—
Easterr Torpedo Co.
Zero Hour Torpedo Co.
Wheels—Steel Automotive—
Budd Wheel Co.
Winches—
Braden Co.
Oil Conservation Engineering Co.
Wire Lines (See Cables—Steel)—
Wire Ropes (See Rope—Wire)—
Wood Patterns and Models—
Gaso Pump & Burner Mfg. Co.
Working Barrels—
Axelson Machine Co.
Bradford Motor Works.
D & B Pump & Supply Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Northrup Equipment Co.
Oil Well Supply Co.
Working Barrel Valves (See Valves—Working Barrel)—
Wrenches—Drop Forged—
Williams, J. H., Co.
Wrenches—Pipe—
Trimont Mfg. Co.
Walworth Mfg. Co.
Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.

Z

Zinc Oxide—
Eagle-Picher Lead Co.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS
Pipe Line Statement for October

Runs

	Month	Daily Av.
*Prairie Pipe Line Co.	4,346,820	140,220
Gulf Pipe Line Co.	822,895	26,545
Texas Pipe Line Co.	550,605	17,763
Magnolia Pet. Co.	1,075,461	34,692
Empire Pipe Line Co.	788,170	25,425
Cosden Pipe Line Co.	636,971	20,547
Sinclair Pipe Line Co.	1,422,900	45,900
*Other lines	8,773,000	283,000
Total October	18,416,822	594,092
Total September	18,220,224	607,340
Difference	196,598	13,248

Shipments

†Prairie Pipe Line Co.	3,990,645	128,731
Gulf Pipe Line Co.	1,202,285	38,799
Texas Pipe Line Co.	746,565	24,083
Magnolia Pet. Co.	1,337,817	43,156
Empire Pipe Line Co.	794,177	25,619
Cosden Pipe Line Co.	857,706	27,668
†Sinclair Pipe Line Co.	2,536,944	81,837
*Other lines	9,145,000	295,000
Total October	20,611,139	640,892
Total September	18,850,808	628,359
Difference	1,760,331	12,533

Stocks

*Prairie Oil & Gas Co.	26,822,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. and Gypsy Oil	7,117,409
The Texas Co.	4,444,168
Magnolia Pet. Co.	6,682,552
Empire Pipe Line Co.	3,325,579
Cosden Pipe Line Co.	1,864,496
Sinclair Crude Oil Purchasing Co.	23,400,000
Carter Oil Co.	16,804,714
*Other lines	10,250,000
Total November	102,710,918
Total October	103,897,697
Difference	1,186,779

*Estimated. †Prairie shipments include Texas crude oil. Sinclair shipments include Texas and Wyoming crude oil.

Note: Stocks do not include 6,000,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINES
Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for September and October:

	Sept. '25	Oct. '25
Nat. Transit	158,910.27	160,485.98
S. W. Pa. Pipe	91,875.31	88,614.81
Eureka P. L.	357,506.00	369,811.62
Buckeye P. L. (Macksb'g)	296,333.41	303,780.86
Buckeye P. L. (Cleveland)	13,396.16	12,981.45
Buckeye P. L. (Lima, etc.)	130,649.37	127,521.41
Indiana P. L.	11,048.88	9,506.89
Cum'land P. L.	393,395.97	292,806.37
N. Y. Transit	18,511.37	20,572.89
Tidewater P. L.	149,530.51	150,134.69
Pure Oil	175,849.14	182,452.25
Emery P. L.	49,086.26	48,956.62
Indian Ref.	93,929.45	86,547.46
Paragon Dev.	28,258.77	28,235.35
Pittsburgh P. L.	7,110.31	7,323.63
Total	1,875,291.08	1,890,833.37
Daily average	62,509.70	60,994.62

Note—Indian Refining Co. also reported other receipts of 434,734.08 bbls. Paragon Refining Co. had other receipts of 158,-901.10 bbls. Paragon Development had other receipts of 2,562.46 bbls. Pure Oil had other receipts of 64,163.76 bbls. Pittsburgh P. L. had other receipts of 506.13 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for September and October:

	Sept. '25	Oct. '25
Nat. Transit	382,049.14	397,576.55
S. W. Pa. Pipe	341,809.20	364,951.95
Eureka P. L.	170,953.05	135,027.77
Buckeye P. L. (Macksb'g)	98,553.82	133,831.42
Buckeye P. L. (Cleveland)	1,400.95	969.15
Buckeye P. L. (Lima, etc.)	793,826.27	795,060.85
Indiana P. L.	963,603.95	995,708.07
Cum'land P. L.	128,622.92	157,874.91
Southern P. L.	22,373.37	651.00
Crescent P. L.	10,701.14	
N. Y. Transit	550,262.53	466,894.84
Northern P. L.	129,295.69	73,874.32
Tidewater P. L.	144,975.14	175,398.69
Pure Oil	260,864.22	244,601.70
Emery P. L.	48,658.90	48,208.05
Paragon Ref.	39,045.65	98,916.25
Indian Ref.	476,931.09	378,805.98
Paragon Dev.	30,183.33	32,046.70
Pittsburgh P. L.	7,461.30	7,077.88
Total	4,701,572.76	4,507,036.03
Daily average	156,719.09	145,388.26

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of September and October were as follows:

	Sept. '25	Oct. '25
Nat. Transit	903,098.26	984,802.37
S. W. Pa. Pipe	791,307.63	721,496.86
Eureka P. L.	1,372,542.87	1,492,661.69
Buckeye P. L. (Macksb'g)	266,078.56	244,229.22
Buckeye P. L. (Cleveland)	63,563.69	57,105.89
Buckeye P. L. (Lima, etc.)	3,568,404.38	3,509,002.32
Indiana P. L.	556,281.70	595,464.31
Cum'land P. L.	587,300.60	571,941.31
Southern P. L.	510,359.39	528,343.58
Crescent P. L.	10,086.11	
N. Y. Transit	681,344.81	812,350.18
Northern P. L.	782,710.31	735,413.58
Pure Oil	360,508.97	355,376.69
Emery P. L.	26,778.95	26,957.36
Paragon Ref.	171,653.02	200,996.85
Indian Ref.	119,181.06	260,559.26
Paragon Dev.	6,319.52	5,428.40
Pittsburgh P. L.	3,748.32	4,720.44
Total	10,781,753.06	11,086,850.31
Increase	192,728.26	305,097.25

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of September and October showing the gross stocks of the above fields:

	Sept. '25	Oct. '25
Penna.	3,740,211.77	3,842,909.85
Lima	1,244,314.67	1,135,862.12
Kentucky	1,243,334.36	1,143,060.43
Mid-Cont.	4,514,989.02	4,850,093.71
Illinois	38,903.24	114,924.20
Total	10,781,753.06	11,086,850.31

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1922	1923	1924	1925
Jan.	67,702	75,790	62,638	56,821
Feb.	75,096	71,092	68,023	60,606
Mar.	78,531	76,592	68,721	60,575
April	75,462	75,614	71,058	63,062
May	77,592	77,365	68,942	59,217
June	76,192	77,592	63,230	61,270
July	76,435	71,879	64,208	62,639
Aug.	79,387	76,910	59,942	59,686
Sept.	78,512	72,358	62,930	62,510
Oct.	77,209	76,256	64,976	60,995
Nov.	75,313	70,763	56,282	
Dec.	73,351	69,271	56,814	

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1922	1923	1924	1925
Jan.	119,792	171,067	145,518	157,889
Feb.	111,362	164,219	148,732	160,868
Mar.	127,753	185,487	147,098	154,591
April	127,068	170,751	147,611	151,429
May	127,840	177,102	134,997	146,995
June	137,628	173,598	143,010	149,487
July	137,872	168,330	124,187	161,338
Aug.	153,275	142,766	123,120	161,730
Sept.	158,761	137,266	127,325	156,719
Oct.	165,345	134,597	123,170	145,388
Nov.	165,677	131,426	124,400	
Dec.	172,861	139,909	161,892	

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1923	1924	1925
Jan.	14,040,567	13,907,202	11,258,276
Feb.	14,022,487	11,844,068	11,192,924
Mar.	13,873,146	10,906,762	11,155,297
April	13,737,575	10,922,743	11,063,022
May	13,815,622	11,335,309	11,207,562
June	14,541,352	11,544,204	11,093,764
July	14,645,584	12,062,361	11,067,453
Aug.	14,770,539	12,221,676	10,974,451
Sept.	14,803,444	12,206,836	10,731,753
Oct.	14,504,111	12,664,061	11,086,850
Nov.	14,157,726	12,268,530	
Dec.	13,444,361	11,583,680	

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

	Receipts	Shipments	Stocks
1924—			
Oct.	3,342.40	1,880.50	14,590.81
Nov.	3,706.13	432.89	13,267.56
Dec.	3,120.34	2,659.13	12,888.77
1925—			
Jan.	1,730.86	1,881.15	12,938.48
Feb.	2,702.05	4,564.70	11,075.83
Mar.	3,177.21	2,354.30	11,893.74
April	3,040.41	1,780.11	13,159.04
May	2,814.99	5,719.99	10,254.13
June	3,052.75	1,291.93	12,035.95
July	3,639.34	3,174.10	11,550.39
Aug.	3,216.97	1,577.99	13,189.37
Sept.	2,929.99	5,352.05	10,767.31
Oct.	2,869.75	1,499.84	12,137.62

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, Nov. 1	1,999,337.34
Runs from wells	677,366.72
Other receipts	528,592.26
Regular deliveries	548,167.67
Other deliveries	671,360.40

The amount of Illinois oil run by the Tidewater Pipe Co. in October was 29,165.28 bbls. and deliveries were 35,514.65 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

	Runs	Deliveries
1924—		
October	741,767.42	542,865.77
November	650,147.62	521,459.31
December	640,919.23	595,943.28
1925—		
January	695,513.43	573,304.77
February	636,635.20	514,661.52
March	754,335.63	611,348.43
April	622,865.14	637,242.85
May	692,671.94	568,573.62
June	700,090.46	589,535.34
July	724,481.26	564,713.19
August	673,652.38	650,642.97
September	706,434.87	510,697.61
October	706,532.00	633,682.33

The Tidewater Pipe Co., Ltd., also delivered in October 290,167.53 bbls. of Oklahoma oil. The total deliveries of all grades by the Tidewater were 551,080.93.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Average bbls. per week—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
July	36,127	79,891	265,321	98,042	89,873	569,254	.....	39,515	.....	.....	39,515	608,769
August	25,515	68,432	223,097	35,000	92,806	444,850	.....	35,903	.....	4,067	39,970	484,820
September	17,269	35,931	212,106	36,569	89,600	441,469	.....	36,869	.....	.....	36,869	478,338
October	21,455	29,806	143,388	68,642	41,321	304,612	.....	.....	.....	.....	.....	304,612

AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per week—	ATLANTIC PORTS Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
July	93,709	55,545	304,612	133,515	156,485	743,866	173,873	328,455	35,679	53,291	591,298	1,335,164
August	70,455	62,097	326,515	107,933	175,224	742,224	147,234	228,391	18,515	29,258	423,398	1,165,622
September	70,700	41,521	289,221	61,600	194,521	657,693	115,500	163,469	37,800	14,700	330,469	994,162
October	149,709	94,836	275,933	44,030	160,755	725,291	175,000	207,739	13,752	20,321	416,812	1,142,103

GROSS PRODUCTION IN THE UNITED STATES FOR 12 MONTHS

1924—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountain	Eastern Fields	Total
November:	Month	17,767,034	15,955,620	10,731,264	2,597,460	3,461,050	1,965,921	2,783,110	2,941,000	58,207,459
	Daily average	592,234	531,854	357,709	86,582	115,035	65,531	92,937	98,033	1,940,348
December:	Month	18,795,126	16,031,185	11,264,915	2,527,443	3,380,511	1,870,876	2,302,858	3,000,850	59,183,794
	Daily average	606,294	517,135	363,384	81,853	109,049	60,351	74,287	96,802	1,909,155
1925—										
January:	Month	18,743,288	15,462,800	13,790,195	2,520,858	3,278,484	1,774,072	2,627,676	3,045,993	61,243,366
	Daily average	604,622	498,800	444,845	81,318	105,758	57,228	84,760	98,903	1,976,238
February:	Month	16,869,823	13,905,780	11,361,896	2,466,660	2,886,296	1,547,461	2,666,335	2,905,000	54,609,261
	Daily average	602,494	496,635	405,782	88,095	103,082	55,266	95,226	103,750	1,950,333
March:	Month	18,636,009	14,403,716	13,047,068	2,824,534	3,564,473	1,807,517	2,734,235	3,282,000	60,289,552
	Daily average	600,839	464,636	420,886	91,114	114,983	58,307	88,201	105,871	1,944,502
April:	Month	17,959,653	14,055,450	12,683,520	2,971,110	7,560,240	1,695,780	2,744,691	3,157,000	62,927,444
	Daily average	598,655	468,515	422,784	99,037	252,008	56,526	91,490	107,150	2,026,693
May:	Month	18,820,328	14,436,579	13,165,005	3,493,266	11,813,996	1,887,729	2,799,542	3,167,300	69,632,745
	Daily average	607,107	467,309	424,678	112,686	381,097	60,572	90,308	103,171	2,246,250
June:	Month	19,288,135	13,833,970	13,583,740	3,175,440	9,200,372	1,900,506	2,754,498	3,289,000	66,124,661
	Daily average	642,938	461,099	419,458	105,848	306,679	63,350	91,816	109,000	2,133,063
July:	Month	20,411,049	14,263,565	13,290,917	3,686,675	7,835,819	1,898,178	3,129,199	3,348,000	66,963,402
	Daily average	658,031	460,115	396,804	118,925	262,768	61,231	100,943	108,000	2,160,110
August:	Month	21,005,580	14,441,940	11,919,066	3,558,027	7,460,571	1,843,043	3,168,014	3,177,004	66,562,405
	Daily average	677,599	465,840	384,486	114,777	240,341	59,453	102,194	102,484	2,147,188
September:	Month	20,062,762	14,325,940	11,224,830	3,393,270	6,457,960	1,782,870	3,138,300	3,212,000	64,097,923
	Daily average	668,759	494,168	374,161	113,109	215,965	59,429	104,458	107,067	2,136,567
October:	Month	20,015,076	14,921,199	11,378,323	3,477,146	6,409,281	1,872,121	3,394,500	3,379,000	64,846,656
	Daily average	645,648	481,329	367,043	112,166	206,751	60,391	109,500	109,000	2,161,555
	Total 12 months	228,363,874	176,584,944	145,540,749	36,701,949	73,299,043	21,846,074	34,247,988	38,124,147	754,708,768
	Daily average	625,654	483,794	398,742	100,553	200,819	59,852	93,830	104,450	2,067,696

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